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In the

Supreme Court of the United States

OCTOBER TERM, 1978

SCHOLL, INC.,

Petitioner,

vs.

S.S. KRESGE COMPANY,

Respondent.

PETITION FOR WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE SEVENTH CIRCUIT

JAMES VAN SANTEN
HILL, GROSS, SIMPSON, VAN SANTEN, STEADMAN, CHIARA & SIMPSON
70th Floor Sears Tower
Chicago, Illinois 60606
312/876-0200
Attorneys for Petitioner

EDMUND W. KITCH
1361 E. 56th Street
Chicago, Illinois 60637
Of Counsel

The Scheffer Press, Inc. (312) 263-6850

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No.

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PETITION FOR WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE SEVENTH CIRCUIT

Petitioner Scholl, Inc. respectfully prays that a writ of certiorari be issued to review the judgment of the United States Court of Appeals for the Seventh Circuit entered in this case.

OPINIONS BELOW

The written opinion of the Court of Appeals is reported at 580 F.2d 244, 199 U.S.P.Q. 74, and is printed in Appendix A hereto.

The opinion of the District Court is reported at 193 U.S.P.Q. 695 and is printed in Appendix B.

The oral findings and conclusions of law of the District Court made at the conclusion of the trial are not reported and are printed in Appendix C.

The opinion of the same District Court in a companion case *Scholl, Inc.* v. *Glory Products Trading Co., Ltd.* from which no appeal was taken is reported at 193 U.S.P.Q. 705.

JURISDICTION

The Judgment of the Court of Appeals was dated July 14, 1978 and was entered July 14, 1978. Rehearing was denied on August 22, 1978. The jurisdiction of this Court is invoked under 28 U.S.C. §1254(1).

CONSTITUTIONAL PROVISIONS AND STATUTES

The constitutional provision with regard to patents is set forth in Art. 1, Sec. 8:

> The Congress shall have power . . . To promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries.

The United States Patent Statute is 35 U.S.C. Patents and Section 103 thereof reads as follows:

> §103. Conditions for patentability; non-obvious subject matter.
>
> A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

QUESTIONS PRESENTED

1. Is U.S. Patent No. 3,063,457 valid?

2. What is the role of a Court of Appeals in reviewing a judge verdict of patent validity?

STATEMENT OF THE CASE

This case involves the validity of a patent on an exercise sandal. (App. D, *infra.*) The patented sandal has been widely sold in the United States under the plaintiff's trademark "Dr. Scholl's." The defendant purchased and sold in the United States a Taiwan copy of the Scholl sandal.

An exercise sandal is an odd piece of footwear. It is designed neither for comfort nor for fashion, but to cause the foot itself to work in the course of walking. It provides exercise for muscles of the feet that receive little use when regularly encased in modern shoes. An exercise sandal consists of a solid base with a single strap across the instep. In walking the sandal is held to the foot by the gripping action of the toes. To enable the toes to grip, a ridge is provided across the front of the top surface of the solid base.

The Scholl patent is for an improvement on a prior art exercise sandal patented by Berkemann. On the Berkemann sandal the ridge extended across the front of the sandal under all five toes. The Berkemann exercise sandal was patented and commercially successful in Germany. The Scholl improvement patent teaches that a superior exercise sandal can be made if the ridge terminates short of the big toe and a slight depression is instead provided to receive it. As of 1976, Scholl had sold 55 million pairs of this patented improvement sandal throughout the world. Corresponding patents issued in 10 other countries including 5 with examination systems. (App. B, *infra*, F.F. 36, pp. 18a, 19a)

The district judge, an experienced patent trial judge with a skeptical attitude toward the work of the Patent

Office and the Patent Bar[1], directed the brief two and one-half day bench trial to the issue of validity under 35 U.S.C. §103.[2] Closely following the teachings of *Graham* v. *John Deere Co.*, 383 U.S. 1 (1966), the judge addressed the factual inquiry to three primary issues (App. B, *infra*, pp. 20a-22a): (1) What is the scope and content of the prior art? (2) What are the differences between the prior art and the claims at issue? (3) What was the level of ordinary skill in the pertinent art at the time the invention was made? 383 U.S. at 18. He also addressed *Graham* secondary considerations:[3] (1) That the patented sandal has enjoyed great commercial success. (App. B, *infra*, p. 23a-24a), and (2) That the defendant's sandal was an

[1] See Will, *The Patent System: One Man's View*, 1 APLA Qtrly. 49 (1972), an article which documents his views after 11 years of service as a federal district judge.

[2] Additionally, the District Court denied two separate fully briefed pre-trial motions for summary judgment brought by the defendant on the basis of affidavits and deposition testimony, holding that disputed fact issues required a full trial to determine obviousness under 35 U.S.C. §103. At the trial, live testimony was presented by (1) a former Commissioner of Patents, Robert Gottschalk, (2) a Chicago Patent Attorney, Charles Pigott, (3) an Orthopedic Surgeon specialist, Dr. Carroll B. Larson, and (4) a renowned podiatrist, Dr. Philip Brachman.

[3] Such secondary considerations as commercial success, long felt but unsolved needs, failures of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented. As indicia of obviousness or nonobviousness, these inquiries may have relevancy. 383 U.S. at 18. The District Court even made a synergism inquiry, suggested by two judges of this court as a "requirement" under section 103. (App. B, *infra*, p. 21a, F.F. 45) (White, J. and Brennan, J. dissenting from a denial of certiorari). *Roanwell Corp.* v. *Plantronics, Inc.*, 429 U.S. 1004 (1976).

exact Taiwan copy of the plaintiff's sandal. (App. B, *infra*, p. 8a). The District Court concluded on the basis of its factual findings on these issues that the patent is valid. The Court of Appeals reversed.

The key to the trial court's judgment was a finding, amply supported by the record, that the state of the foot appliance art was not high. Although foot problems afflict millions, they have not been sufficiently function-threatening to cause the government to mobilize the resources of high technology medicine to the foot appliance art. The design of foot appliances has been the nonexclusive province of shoe builders, podiatrists, and medical doctors. It was because of the Court's findings as to the factual state of the pertinent art that the Court concluded that the patent is valid.

The Court of Appeals treated the issue of patent validity as a question of law and, reviewing the record *de novo* concluded that the invention was obvious. No factual finding of the District Court was analyzed in light of the "clearly erroneous" standard of Fed. R. Civ. P. 52(a)[4], nor was it suggested that the District Court had applied an erroneous legal test.

In both the courts below the issue of validity led to this question: Why is it not obvious, once the Berkemann exercise sandal is in the prior art, to modify it by removing the portion of the ridge under the big toe? (App. A, *infra*, p. 7a, App. B, *infra*, p. 22a). The trial judge asked this question for two and one-half days and only at the very end of the trial did he arrive at an answer

[4] "'The rule (52(a)) requires that an appellate court make allowance for the advantages possessed by the trial court in appraising the significance of conflicting testimony and reverse only 'clearly erroneous' findings." *Graver Tank & Mfg. Co. Inc.* v. *Linde Air Products Co.*, 336 U.S. 271, 275 (1949).

that satisfied him. The Court of Appeals asked and answered this question for itself. (App. A, *infra*, p. 7a).

This case was tried in a spirit of mutual inquiry for the truth. The trial judge regularly revealed the state of his thinking and asked the parties to correct him if he misunderstood. The critical expert witness turned out to be Dr. Brachman who had first been identified and prepared by the plaintiff, but who was called to the stand by the defendant and whose careful and subtle answers earned him the confidence of the district judge. Dr. Brachman testified that the invention would have been obvious to him, but not to a person skilled in the pertinent art at the time the invention was made. At the end of Dr. Brachman's testimony the trial judge made it clear that he was prepared to rule for the defendant.

Think, he said, of the footprint of a person standing on sand. If one examines the footprint, he asserted, one will see that the big toe leaves a deeper depression than the other toes. Therefore, wouldn't it be obvious to modify the Berkemann sandal to provide additional room for the big toe? The trial judge asked for comment from the parties. Plaintiff's counsel suggested that Dr. Brachman, still present in the courtroom, was better qualified to comment. A dialogue began:

> Dr. Brachman: . . . I think there is some misconception there. . . .
>
> The Court: . . . Straighten me out.
>
> Dr. Brachman: Because we walk on hard surfaces, we must design footwear that will be normal for the foot on hard surfaces, and we can't even think about the fact that we at times used to walk on soft surfaces; therefore, we must design the type of footwear where the toe, where the foot will function and it will bring about the same amount of pressure, but what will happen to it when it hits the hard surface, this is what we have to think about.

> The Court: I understand that, but you said this design was anatomically sound. . . . [because] there is a depression for the big toe which permits it to get a lower level on the bottomside than the other four toes. . . . That is what would happen if you step in the sand. . . . Isn't that right?
>
> Dr. Brachman: . . . I really can't answer that [what would happen when you step in the sand] because I have studied walking in the sand [only] in Southern Portugal, the clam diggers, and I have taken pictures of them, and actually, there was no difference between the amount of digging they did in the sand with their lesser toes than the big toe. . . .
>
> The Court: I am not talking about digging. I am talking about just standing in a weight bearing position.
>
> Dr. Brachman: Then there wouldn't be much weight on the big toe at all if you are just standing.
>
> The Court: And the big toe wouldn't make a deeper depression than the other four toes?
>
> Dr. Brachman: No sir. . . . Normal standing it [weight] would be distributed fairly evenly along the whole foot.
>
> The Court: What you are really telling me, this is anatomically more correct not for the simple standing position, but walking. . . . As an exerciser. . . . You are satisfied, that given the average designer's knowledge of how the foot works, it wouldn't have been obvious to take that Berkemann patent and design the Scholl patent?
>
> Dr. Brachman: That is my interpretation.

Following this colloquy, the district judge concluded that the patent was valid. The improvement patent is non-obvious because the problems of designing an exercise sandal relate not to the position of the foot at rest but to the more complex working of the foot in motion. If the modification had been obvious to the inventor of the Berkemann sandal, then he would have disclosed and claimed a ridge under either all five or only four toes.

His failure to do so excluded from the scope of his patent a sandal that has proven to have superior qualities.

In his testimony Dr. Brachman had explained why the modification was not obvious to the art. He explained that the nature of the movement of the foot in walking was not properly understood by the art. He testified that in the 1950's it was believed that as the foot is dropped the heel strikes first, then contact moves forward along the outside edge of the foot to the little toe, and then across the front of the foot to the big toe. With this view of the walking motion, a designer would see the role of the big toe in walking as minor and extend the ridge under the toe to increase the available gripping surface, as Berkemann did. Brachman showed ultra high speed movies to the Court, taken by him in the 1950's, which demonstrate that this theory of the movement of the foot is wrong, although, Dr. Brachman testified that this is still not entirely accepted in the art. The movies show that in walking, the big toe comes down first before the other toes and plays an important role in establishing the initial balance of the foot. Only if a designer were aware of this would he be moved to provide the big toe with a more stable resting place in spite of the loss of gripping surface.

The prior art relating to orthopedic shoes relied upon by the defendant and the Court of Appeals is not pertinent, Dr. Brachman testified, because in those appliances the foot is held to the sole and the natural motion of the foot is not involved.

REASONS FOR GRANTING THE WRIT

1. The Court should grant a writ of certiorari because this case presents a question of importance to federal judicial administration. That question is the role of the Courts of Appeal in patent litigation. The activist appellate role asserted by the court below increases the incentives for losing parties to appeal to the Courts of Appeal, adding to their docket burden, and threatening to disrupt emerging solutions to the procedural problems of patent litigation.

This Court is no stranger to the workload problems of the Courts of Appeal, nor to the role that patent cases are thought to play in that problem.[5] Patent cases often present courts with complex and extensive records and almost always involve the question of validity. The Court of Appeals was influenced by the fact that the district judge had found this case "close", (App. A, *infra*, p. 4a), but litigated patent cases are frequently close. If the losing party knows that the outcome on appeal, even in the absence of errors of law, will be little affected by the outcome in the district court, the incentives to appeal will be high. Conversely, the incentive of the district court to resolve the issues with care and deliberation will be reduced if he knows that his findings will not be accorded any presumptive validity by the reviewing court.

The procedure for the adjudication of patent validity matters has been undergoing hopeful change in the past

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[5] The current position of the government is reflected by a proposal circulated for comment by the Department of Justice whereby *ALL* patent appeals would be heard by a specialist court in Washington, D.C., see *A Proposal to Improve the Federal Appellate System*, PATENT, TRADEMARK & COPYRIGHT JOURNAL, August 3, 1978, No. 389 at D-1; cf. COMMISSION ON REVISION OF THE FEDERAL COURT APPELLATE SYSTEM, STRUCTURE AND INTERNAL PROCEDURES: *Recommendations for Change* (1975).

decade. *Blonder-Tongue Laboratories* v. *University of Illinois Foundation*, 402 U.S. 313 (1971) held that the owner of a patent that had been held to be invalid in one proceeding cannot relitigate the patent against other parties. This holding, combined with modern transfer procedures, has tended to produce a single lead case in which the validity or invalidity of a particular disputed patent is litigated with national effect.[6] This change has reduced the litigation burden of patent cases on the federal district courts and effectively assigned to a single district judge the responsibility for deciding once and for all the validity or invalidity of a patent.

This change has been accompanied by efforts from the Patent Office to provide more assistance to the District Courts in the trial of patent cases. It has long been the complaint of this Court and others that the Patent Office action is of little help to the trial court because the record before the trial court will contain relevant prior art not considered by the Patent Office. Thus the rule that the presumption of validity disappears if there is relevant prior art not considered by the Patent Office is fre-

[6] The present case is exemplary. A second action against the Taiwan manufacturer and the St. Louis based Taiwan importer was consolidated for trial after the importer was dismissed for improper venue: Civil Action No. 75 C 622 in the Northern District of Illinois, 193 U.S.P.Q. 705. A third action against the Taiwan importer was brought in the St. Louis Federal District Court (8th Circuit) and was quickly resolved. The Court adopted findings of fact and conclusions of law very closely patterned after those entered by Judge Will in Chicago. Civil Action No. 77-0301-(C)1 in the Eastern District of Missouri.

Another action presently pending in New York City in the United States District Court for the Southern District of New York (2nd Circuit) with Melville Corporation is in a hold status pending final determination of this case. Civil Action No. 77 CIV 755.

quently invoked in patent cases. (Parenthetically, the district court here was moved to comment that this was an unusual case because all of the relevant prior art *had* been cited to the Patent Office. App. B, *infra*, pp. 19a, 20a, F.F. 40, 41). This has been a difficult problem for the Patent Office because at the time of application it is impossible to give all applications the kind of study they would receive in litigation, yet it is impossible to predict which particular patents will be of sufficient importance and of sufficiently uncertain validity to cause litigation. The Patent Office, through creative use of its rule making power, is now moving toward the following solution: Create an opportunity for re-examination by the Patent Office after civil discovery has been completed.[7] The Patent Office can then examine on the record that the district judge will consider, and the district judge will have the advantage, of the expert and relevant view of the Patent Office.

The emerging procedure shows promise of working as follows. First, the patent owner, subject to the rule that an adverse outcome is binding on him, will sue all major infringers so that he can at least have an outcome binding on them if he wins. Second, using transfer procedures, the case will be consolidated in a single district court for an authoritative adjudication. Third, discovery will be conducted and a record satisfactory to all parties developed. Fourth, if this record shows that the Patent Office did not act in light of relevant and material information, the patent owner can move to stay the proceeding pending submission of his patent to the Patent Office for re-examination. After re-examination, the case will then proceed to trial in the district court.

This procedure would focus the validity determination in a federal district court with the facts before it and

[7] 37 C.F.R. §1.175(4).

with the time to adjudicate the issue in light of the conflicting public interests at stake in the patent system, but with access to the informed view of the specialized office responsible for centralized administration of the patent system.

The decision of the appellate court below and others like it will greatly complicate this emerging procedure for patent validity litigation. Instead of focusing the procedure on a single district court, the important decision will be made in the Court of Appeals. This will increase the complexity of the procedure with little gain in the quality and uniformity of patent decisions. The district court, which will have the advantage of an extended, live trial on the issues, will not make the authoritative decision on validity. That will be the province of a court of appeals. But there will be no gain in uniformity because the decision of any panel of a Court of Appeals as to the validity of a particular patent will have little significance beyond the facts of the particular case before the panel.

Mr. Justice Stevens (then speaking for the Seventh Circuit Court of Appeals) commented on the advantages of the district court in the trial of a patent case in *Chicago Rawhide Mfg. Co.* v. *Crane Packing Co.*, 523 F.2d 452, 460 (7th Cir. 1975):

> [A]s we read the transcript of the testimony in this case, we are impressed with the importance of having live witnesses, subject to cross-examination, explain the operation of physical exhibits in a way which enables a district judge to understand what is before him and to interrupt with proper questions when he does not understand. * * * [O]ur understanding of the written record, even when aided by briefs and oral argument, is comparable to that of a student who has taken a correspondence course instead of attending classes on a daily basis with a laboratory available for experiment when needed. The

> trial judge really is in a better position to evaluate the obviousness issue than we are.

2. The Court should grant a writ of certiorari because the decision below reflects confusion in the Courts of Appeal about the law of patentability under 35 U.S.C. §103 and *Graham* v. *John Deere Co.*, 383 U.S. 1 (1966). The simple technology and clear factual record in this case lend themselves to a clarification of the law of patentability.

Graham taught that the issue of patentability was to be decided as follows. First, the "scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or non-obviousness of the subject matter is determined. Such secondary considerations as commercial success, long felt but unsolved needs, failures of others etc. . . . as indicia of obviousness or non-obviousness . . . may have relevancy." 383 U.S. at pp. 17, 18. The district court followed these instructions. The Court of Appeals ignored them.

In a companion case to *Graham*, *United States* v. *Adams*, 383 U.S. 39 (1966), this Court held a patent on a battery whose construction was suggested by the prior art valid because of specific evidence in the case that those of ordinary skill in the art had believed at the time of the invention that the battery would not work. Similarly, the factual record in this case showed that the construction of the exercise sandal in question was contrary to the theories of the pertinent art.

In three cases construing Section 103 since *Graham*, this Court has reversed an appellate tribunal that had reversed the Section 103 determination of a trial court or of the Patent Office. *Sakraida* v. *Ag Pro, Inc.*, 425 U.S.

273 (1976); *Dann* v. *Johnston*, 425 U.S. 219 (1976); *Anderson's—Black Rock, Inc.* v. *Pavement Salvage Co.*, 396 U.S. 57 (1969). In each of these decisions the Court emphasized the central role of the Section 103 inquiry as explained in *Graham*. In each of these three cases the court followed the decision of the finder of fact and reversed the appellate tribunal.

The decision below cited no Supreme Court precedent other than *General Electric Co.* v. *Jewel Incandescent Lamp Co.*, 326 U.S. 242 (1945).[8] That citation and the style of the opinion return the law of patentability to the confusion that had prevailed prior to Section 103 and the decision in *Graham*. Much of that law was built upon the concept of inventive novelty, a concept that caused great uncertainty because it is in the nature of technology to develop in incremental steps. Every new invention must draw upon what is already known, and the difference between a combination of old elements and a new invention was difficult for this Court to explain and for the courts below to follow.

The 1952 reviser said of Section 103 that "the section is added to the statute for uniformity and definiteness." And this Court said in *Graham*: "[T]he §103 additional

[8] "Patentability may not rest upon the discovery of a new use or a previously unnoticed advantage of an old structured element." (App. A, *infra*, p. 7a). The Patent Act of 1952 specifically overruled that principle of law and the cases enunciating it, 35 U.S.C. 100 (b) *Commentary on the New Patent Act, P. J. Federico*, U.S.C.A., Title 35, §§1-110 at pp. 16 and 17; *Palmer* v. *United States*, 423 F.2d 316, 323 (Ct. Cl. 1970); See also *Van Veen* v. *United States*, 386 F.2d 462, 465 (Ct. Cl. 1967). The *General Electric* case was overruled by implication in *United States* v. *Adams*, 383 U.S. 39 (1966). See Edmund W. Kitch, *Graham* v. *John Deere Co.: New Standards for Patents*, 1966 Sup. Ct. Rev. 293, 330 (1966).

condition, when followed realistically, will permit a more practical test of patentability. . . . We believe that strict observance of the requirements laid down here (in *Graham*) will result in that uniformity and definiteness which Congress called for in the 1952 Act."

Later in the opinion the Court, in a discussion of the secondary considerations of long felt need and commercial success, referred to the need for a law of patentability that poses issues the district judges can effectively address.[9]

Unfortunately, the promise of Section 103 has not been fully realized, as even a casual reading of the numerous Court of Appeals' patentability decisions demonstrate. The conflicts are not only between circuits, but within them. On the one hand are the many cases that follow the teachings of *Graham* and instruct the district judges to make the findings of fact it requires. Shortly after *Graham*, the Seventh Circuit, in a much cited opinion, cautioned the district judges to make the findings re-

[9] "These legal inferences or subtests do focus attention on economic and motivational rather than technical issues and are, therefore, more susceptible of judicial treatment than are the highly technical facts often present in patent ltigation. See Judge Learned Hand in *Reiner* v. *I. Leon Co.*, 285 F.2d 501, 504 (1960). See also *Note, Subtests of "Non-obviousness", A Nontechnical Approach to Patent Validity*, 112 U.Pa.L.Rev. 1169 (1964). Such inquiries may lend a helping hand to the judiciary which, as Mr. Justice Frankfurter observed, is most ill-fitted to discharge the technological duties cast upon it by patent legislation. *Marconi Wireless Co.* v. *United States*, 320 U.S. 1, 60 (1943). They may also serve to 'guard against slipping into use of hindsight,' *Monroe Auto Equipment Co.* v. *Heckethorn Mfg. & Sup. Co.*, 332 F.2d 406, 412 (1964), and to resist the temptation to read into the prior art the teachings of the invention in issue." *Graham, supra*, at 36.

quired by *Graham*.[10] That precedent was ignored by the Court of Appeals panel here. In the Ninth Circuit, one panel has held that Section 103 and *Graham* made no change in the role of the pre-1952 inventive novelty tests,[11] while another panel emphasized the central role of the *Graham* factual inquiry.[12]

A commentator has observed that "even today, the meaning of Section 103 is anything but clearly judicially established. It is safe to say . . . that the various circuits of the United States Courts of Appeal and the Supreme Court of the United States differ seriously among each other (as do the three-judge appellate panels *within* circuits) with regard to the meaning of 'nonobviousness.' "[13]

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[10] *Gass* v. *Montgomery Ward & Co.*, 387 F.2d 129 (7th Cir. 1967); cited in *Systematic Tool & Machine Co.* v. *Walter Kidde & Co., Inc.*, 555 F.2d 342, 348 (3rd Cir. 1977); *Compton* v. *Metal Products, Inc.*, 453 F.2d 38, 42 (4th Cir. 1971); *Rockwell* v. *Midland-Ross Corp.*, 438 F.2d 645, 652 (7th Cir. 1971); and *Univ. of Illinois Foundation* v. *Blonder-Tongue Lab., Inc.*, 422 F.2d 769, 778 (7th Cir. 1970), *vacated on other grounds*, 402 U.S. 313 (1971), *cert. denied* 409 U.S. 1061 (1972); cf. *Colourpicture Publishers, Inc.* v. *Mike Roberts Color Productions, Inc.*, 394 F.2d 431 (1st Cir. 1968).

[11] *Regimbal* v. *Scymansky*, 444 F.2d 333, 339 (9th Cir. 1971); cf. *Deere & Company* v. *Sperry Rand*, 513 F.2d 1131 (9th Cir. 1975).

[12] *Reeves Instrument Corp.* v. *Beckman Instruments, Inc.*, 444 F.2d 263, 271 (9th Cir. 1971), *cert. denied*, 404 U.S. 951 (1971). *See also, Santa Fe-Pomeroy, Inc.* v. *P & Z Co., Inc.*, 569 F.2d 1084 (9th Cir. 1978); *Austin* v. *Marco Dental Products, Inc.*, 560 F.2d 966 (9th Cir. 1977), *cert. denied*, 98 S.Ct. 1477 (1978); *Safe Flight Instrument Corp.* v. *McDonnell-Douglas Corp.*, 482 F.2d 1086 (9th Cir. 1973). Another clear example of these two different approaches is the majority and dissenting opinions in *U.S. Philips Corp.* v. *National Micronetics, Inc.*, 550 F.2d 716 (2nd Cir. 1977), *cert. denied*, 98 S.Ct. 183 (1977).

[13] Kayton, *Nonobviousness of the Novel Invention*—35 U.S.C. §103, published in *Coursebook*, 1977 PATENT LAW CONFERENCE (B.N.A. 1978) at 2.102.

Writing of the current law, Judge Clark's law clerk in *Graham* has said: "In reading the later cases, I lament along with you the fact that the courts have strayed from the methodology in the *trilogy* cases. There has been a failure to appreciate that methodology. . . . I think it was the high hope of *Graham* and its companions that there would be injected a more easily handled approach to the thorny and difficult question of patentability. It appears . . . that what has apparently happened is that the search for *mots justes* has been revived. . . ."[14]

In recounting the history of the drafting of Section 103, Judge Rich of the Court of Customs and Patent Appeals has said that the key concept behind Section 103 was to get away from the troublesome concept of invention and to write the law in terms of the requirements for patentability. "This," he observed, "is the simple idea which many courts and many patent lawyers still have not taken."[15] "The ultimate reason for writing Section 103 into the statutory law was that the requirement for invention was a lead razor which could not take an edge and could be nothing other than a blunt instrument."[16]

Because this case presents a clear conflict between a district court that followed the teachings of *Graham*, and a Court of Appeals panel that followed the old law of inventive novelty, it is a good opportunity for this Court to contribute to a clarification of this central issue.

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[14] Reed, *Some Reflections on Graham* v. *John Deere Co.*, published in *Coursebook*, 1977 PATENT LAW CONFERENCE (B.N.A. 1978) at 2:301, p. 2:307.

[15] Rich, *Why and How Section 103 Came To Be*, published in *Coursebook*, 1977 PATENT LAW CONFERENCE (B.N.A. 1978) at 1:209.

[16] Id. at 1.213.

The decision below, which reverses a district court decision faithful to *Graham,* on the basis of obsolete pre-1952 law, threatens the stability and uniformity that many thought the Court had mandated in *Graham.* The instability thus engineered will breed litigation, particularly in the Courts of Appeal. Increased uncertainty about the validity of particular patents will undermine the important public functions of the patent system in encouraging and facilitating technological progress.

CONCLUSION

The Court should grant a writ of certiorari.

Respectfully submitted,

JAMES VAN SANTEN
HILL, GROSS, SIMPSON, VAN SANTEN,
STEADMAN, CHIARA & SIMPSON
70th Floor Sears Tower
Chicago, Illinois 60606
312/876-0200
Attorneys for Petitioner

EDMUND W. KITCH
1361 E. 56th Street
Chicago, Illinois 60637
Of Counsel

APPENDIX A

IN THE
UNITED STATES COURT OF APPEALS
For The Seventh Circuit

No. 77-1308

SCHOLL, INC.,
Plaintiff-Appellee,

vs.

S. S. KRESGE COMPANY,
Defendant-Appellant.

Appeal from the United States District Court for the Northern District of Illinois, Eastern Division.
No. 74-C-2302—HUBERT L. WILL, *Judge.*

ARGUED DECEMBER 2, 1977—DECIDED JULY 14, 1978

Before SPRECHER and TONE, *Circuit Judges,* and GRANT, *Senior District Judge.**

TONE, *Circuit Judge.* The issue in this case is whether a combination patent on an exercise sandal is invalid for obviousness under 35 U.S.C. § 103. The District Court, after a bench trial, held the patent valid and infringed. We reverse the judgment.

* The Honorable Robert A. Grant, Senior District Judge of the United States District Court for the Northern District of Indiana, is sitting by designation.

Reduced to its essentials, the alleged invention consists of changing the position provided for the big toe in the sole of the sandal. A prior German patent, known as the Berkemann patent,[1] taught the design of an exercise sandal that was the same in the following respects to that of the Bittner, et al., patent[2] in suit:

(1) a rigid sole block in the shape of the foot,[3]

(2) with a loose fitting strap fitting across the foot to hold the sandal on the foot, and

(3) a ridge on the sole block on which the toes rest.

The Berkemann sandal was sold to the general public at least as early as 1950, and some 25,000,000 pairs of that sandal were sold in 50 countries, including the United States, between 1950 and 1970.[4]

The patent in suit merely called for two changes in the Berkemann design, neither of which was new, *viz.*, eliminating the part of the ridge under the big toe and providing a slight depression under that toe.[5]

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[1] German Utility Model Patent 1,775,539, granted July 29, 1958.

[2] U.S. Patent No. 3,063,457, filed October 14, 1959, issued November 13, 1962.

[3] Although not mentioned in the Berkemann patent, the sole of the sandal made and sold under that patent was also contoured to accommodate the shape of the bottom of the foot.

[4] The Berkemann patent was not cited to the Patent Office in the application proceedings leading to the issuance of the patent in suit, but the District Court found that a general description of a sandal of the Berkemann type was provided and therefore the examiner was not misled.

[5] The single claim of the patent is as follows:

> A foot exerciser sandal comprising a sole block of rigid material contoured in keeping with the plantar surface of a human foot and having a depression formed therein for receiving the great toe, a transverse elevation on said block positioned to underlie

As early as 1938 Dr. Phillip R. Brachman, one of the medical experts who testified at the trial (who was originally identified as plaintiff's expert but who was called as a witness for the defendant), wrote a book[6] in which he discussed the idea of a ridge for the toes and recommended that the ridge not be extended to the area under the big toe.[7] A depression for the big toe anterior to the ridge is not mentioned in the Berkemann patent, but such a depression appears in the exemplification of that patent that is in evidence.

A depression for the big toe in relation to the other toes and the ball of the foot was taught as anatomically

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[5] (Continued)

> the outer four toes on a foot, said elevation terminating inwardly and abruptly adjacent the location of the great toe, strap means secured to said block in position to embrace the foot of a user in the region of the metatarsal arch, said strap means being the only means for retaining the sandal on the foot of a user, whereby gripping of said elevation by the outer four toes maintains the heel portion of the block adjacent the heel of the foot during walking.

[6] The date stated in the text appears from Brachman's testimony. An extract from a later (1966) edition of the book, entitled *Mechanical Foot Therapy,* is in evidence.

[7] Dr. Brachman also testified that during the period prior to the patent in suit he modified the Levy Mould, used to construct a ridge under the interphalangeal areas of the toes in custom-made therapeutic appliances, by removing that portion of the mould extending under the great toe. Dr. Levy's ideas are stated in Levy, Pod. D., *An Applicance to Induce Toe Flexion On Weight Bearing,* Pages 24, 26, Journal of National Association of Chiropodists, Vol. 40, No. 6, June, 1950; Schuster, Pod. D., *Modifications In The Construction Of The Levy Mould,* Page 33, Journal of National Association of Chiropodists, Vol. 40, No. 6, June, 1950; Levy, Pod. D., *Structural Changes In The Levy Mould,* Page 37, Journal of National Association of Chiropodists, Vol. 41, No. 2, February, 1951.

correct in the Stroup patent issued in 1951,[8] which applied that design to the sole of a shoe. In addition, a 1941 publication by Musebeck Shoe Company entitled "Your Patient and His Feet" taught "hollow[ing] out" the insole to fit the contours of the foot, including "the ball of the great toe."

The Bittner patent is thus a combination patent, combining Berkemann with Stroup, Musebeck Shoe Company, and Brachmann. It amounted to changing the Berkemann sandal by honing off the ridge under the big toe as advocated by Brachmann and providing a slight depression as taught not only by the production model of the Berkemann sandal but also by the Stroup patent and the Musebeck Shoe Company book.

The district judge, although stating that he "had enough trouble deciding it wasn't an obvious modification of Berkemann,"[9] made an oral finding that the modification resulted in "some anatomical, or therapeutic, orthopedic benefit, improvement." He later entered written findings[10] that the modification was

> a novel and useful combination of elements having a unique interdependent functional relationship, thereby affording a synergistic result which in and of itself was non-obvious, namely, the automatic separation of the great toe from the other four toes, resulting in some anatomical advantage and beneficial orthopedic or podiatric effects on the foot as well as promoting increased comfort.

The written findings also stated,

> The differences between the prior art and the claim of the patent reside in the combination of a metatarsal crest which underlies the four lesser toes, but terminates short of the great toe, and a depression to receive the metatarsal head of the great toe, both features being provided in a contoured rigid sole block having a strap means as the sole means of retaining the sandal on the foot. That combination constitutes a patentable improvement over the prior art.

In addition the court found that the combination would not have been obvious to a person having ordinary skill in the art.[11]

[8] U.S. Patent No. 2,539,557, issued January 30, 1951.

[9] This statement was made in the course of explaining why the court did not find wilful infringement.

[10] The written findings were submitted by counsel for the prevailing party and entered following revisions by the court that are not material here.

[11] The relevant art was found to be "the sandal art," which was practiced by "podiatrists and other practitioners who investigate and treat disorders of the feet," the requisite level of skill in which "is attained, if not surpassed, by orthopedic and podiatric surgeon specialists." The level of ordinary skill in that art, the court went on to say, "is surpassed by experts of the extraordinary and superior skills" exemplified by the experts who testified in the case, Dr. Brachman, previously mentioned, and Dr. Carroll B. Larson, an expert called by defendant. In considering what would have been obvious to physicians of ordinary skill, it is to be noted that the essential idea of the patent, eliminating the ridge under the big toe, was recommended in Dr. Brachman's book published in 1938 and that Dr. Larson testified that the release of tension in the big toe created by allowing the big toe to rest on a flat weight-bearing surface "has been known for at least fifty years." As for providing a depression for receiving the big toe, Stroup had previously taught that such a depression is anatomically correct, *i.e.*, increases comfort. See text, *supra*. In fact, at one point during direct examination, Dr. Brachman acknowledged that it has been known for "probably a million years or so" that allowing a depression for the big toe is anatomically correct. This evidence undermines Dr. Brachman's opinion and the District Court's finding that the Bittner sandal would not have been obvious to a person ordinarily skilled in the sandal art. We add that we do not share Dr. Brachman's apparent skepticism concerning the size of the readership of his book on foot therapy, for, in view of his superior qualifications, as noted by the District Court, it is reasonable to assume that many physicians of ordinary skill would have consulted the book.

Although we base our decision on another ground, we note that the evidence of the orthopedic usefulness asserted in the patent specifications for the Bittner modification is slight. The modification has little to do with the ostensible[12] function of the patented sandal, which is to exercise the foot, because the exercise occurs through the gripping action of the toes to keep the sandal from falling off when the wearer is walking, and this occurs regardless of the position of the toes. The orthopedic effect asserted for the modification in the specifications is that, by providing "an anatomically correct positioning of the toes when the sandal is put on," the modification "prevent[s] the formation of crooked toes, and alleviate[s] or counteract[s] conditions such as hallux valgus." (Hallux valgus is "angulation of the great toe away from the midline of the body, or toward the other toes." *Dorland's Illustrated Medical Dictionary* 642 (24th ed. 1965).) The District Court's finding that the modification actually produced "some" orthopedic benefit apparently was based on the view that depressing the position of the big toe had "some" deterrent effect on its lateral movement. That effect was described by Dr. Larson, the only expert who testified specifically concerning the orthopedic benefit to be derived from the modification, as slight and having a "very small amount" of medical significance. The record is thus extremely weak on the issue of whether the alleged invention produces an orthopedic benefit of any consequence, but, even if plaintiff's proof on this point had been satisfactory, the patent could not be sustained for a reason to which we now turn.

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[12] Dr. Larson, whom plaintiff characterizes as "one of the most renowned orthopedic specialists in the United States," agreed with the District Court's statement that the patented sandal "is really essentially a comfortable device, and to call it an exercise sandal is gilding the lily . . . ." He could "see no difference" between the Berkemann and Bittner sandals "in regard to strengthening of the entire structure of the foot," prevention of arch sag, relieving stiffened joints, causing calluses to disappear, or stimulation of circulation of the blood. The Bittner patent claimed therapeutic benefits in these respects.

Plaintiff concedes in its brief that "improved comfort alone would not have been sufficient" to entitle it to prevail on the obviousness issue, which we take to be a concession that honing off the ridge and providing a depression under the big toe to make the sandal more comfortable was obvious. Even without this concession, we would have no difficulty in reaching the same conclusion.

The obviousness of the combination of old elements for the purpose of promoting comfort disposes of the case. Patentability may not rest upon the discovery of a new use or a previously unnoticed advantage of an old structural element. *General Electric Co.* v. *Jewel Incandescent Lamp Co.*, 326 U.S. 242, 247-249 (1945); *Preuss* v. *General Electric Co.*, 392 F.2d 29, 33-34 (2d Cir.), *cert. denied*, 393 U.S. 834 (1968); *Gould-National Batteries, Inc.* v. *Gulton Industries, Inc.*, 361 F.2d 912, 914 (3d Cir. 1965); *cf. Research Corp.* v. *Nasco Industries, Inc.*, 501 F.2d 358, 360 (7th Cir.), *cert. denied*, 419 U.S. 1096 (1974). Before the issuance of the Bittner patent, it would have been obvious to persons of ordinary skill in the sandal art to improve the comfort of an exercise sandal by lowering the position of the big toe pursuant to the teachings of Stroup and others. The discovery that the combination also had some orthopedic benefit would not make patentable that which was already in the public domain.

We therefore find the patent invalid for obviousness.

REVERSED.

A true Copy:

Teste:

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Clerk of the United States Court of Appeals for the Seventh Circuit

APPENDIX B

DISTRICT COURT, N. D. ILLINOIS, EASTERN DIVISION

SCHOLL, INC.,

vs.

S. S. KRESGE COMPANY,

No. 74 C 2302 — Decided Jan. 20, 1977

Action by Scholl, Inc., against S. S. Kresge Company, for patent infringement, in which defendant counterclaims for declaration of patent invalidity and non-infringement. Judgment for plaintiff.

See also 193 USPQ 705.

James Van Santen, and Hill, Gross, Simpson, Van Santen, Steadman, Chiara & Simpson, both of Chicago, Illinois. for plaintiff.

Richard E. Alexander, Chicago, Illinois for defendant.

Will, District Judge (Orally).

I think I am satisfied that the evidence has demonstrated, to my satisfaction, that the prior art does not anticipate the Bittner-Gnass design; that that design is useful, it is novel, and it would not have been obvious to one with ordinary skill at the time they developed their structure.

Therefore, I conclude that they have a valid patent.

I conclude, second, that the commercial sandal is manufactured consistent with the specifications and claims of that patent.

I conclude, third, that the accused devices are identical, or substantially identical. They were intended to be Taiwan copies of the patented sandal, and that therefore, they infringe.

So, I find that the patent is valid and infringed.

Now, that leaves us the question of relief. I don't find any extraordinary relief warranted in this case. No question that Glory made these. And I think they clearly did induce infringement in the United States.

They first attempted to sell to Scholl, and then they subsequently sold to other people, Modern Shoe. So, they induced infringement in the United States. I don't have any difficulty with that.

I do have some difficulty with any concept of willful, deliberate, knowing infringement by Kresge.

Kresge might reasonably have thought this device—I had enough trouble deciding it wasn't an obvious modification of Berkemann, so if Kresge had been knowledgeable, which I don't guess they were, but if they had done the kind of patent search Mr. Alexander did, and you did when it came to prepare for the trial of this case, they may very well have had a reasonable basis for concluding there wasn't infringement of a valid patent.

So, I am not going to make any findings of willful infringement. I think it is even less than willful because at the time I don't think they knew what the patent situation was.

I am prepared to let what I have said from the bench be findings of fact, and I am prepared to enter more extensive and explicit findings of fact, if you like, and I would like you to prepare them. Enter judgment order with each case.

Actually, those findings of fact should all be applicable to Glory Products. So, if you get my comments on the Kresge case they will also be relevant to the Glory Products case. To the extent that they are applicable, I think they will all be applicable.

Glory Products has some additional findings about inducement. Everything else we have defined in Glory Products anyhow. So we have to make the same findings with respect to validity and infringement and novelty, and usefulness, obviousness, the whole business.

Supplemental Findings of Fact

1. The following findings of fact and conclusions of law were originally drafted by the prevailing party. However, the court has edited and revised the counsel-submitted findings to insure that there is no unnecessary blurring of focus on critically material facts. F. S. Services, Inc. v. Custom Farm Services, Inc., 471 F.2d 671, 176 USPQ 65 (7th Cir. 1972).

2. These findings of fact result from a careful consideration of all of the evidence and the documentary and physical exhibits. These findings are also predicated upon the court's observation of the witnesses and its evaluation of their demeanor, qualifications and credibility.

3. Every finding of fact deemed a conclusion of law is hereby adopted as a conclusion of law.

4. The subheadings used herein are for convenience only. Any finding of fact pertinent to any determinations other than as indicated by the heading under which it appears is to be deemed adopted as a finding of fact applicable to such other determination or determinations as may be appropriate.

The Parties

5. Plaintiff, Scholl, Inc. (hereinafter "Scholl") is a corporation incorporated under the laws of the State of New York. Scholl has its principal office and place of business at 213 West Schiller Street, Chicago, Illinois 60610, and is licensed to do business in the State of Illinois. Prior to June of 1971, it operated under the name of The Scholl Mfg. Co. Inc. and at that time by way of a restated Certificate of Incorporation, changed its name to Scholl, Inc.

6. Defendant, S. S. Kresge Company (hereinafter "Kresge") is a corporation duly organized and existing under the laws of the State of Michigan. Kresge has a place of business at 3100 West Big Bend Road, Troy, Michigan and is licensed to do business in the State of Illinois. Kresge has a number of regular and established places of business in Chicago, Illinois, and the suburbs

thereof, including one such place of business at 4 Oak Brook Center Mall, Oak Brook, Illinois, in this district.

Jurisdiction and Venue

7. This is an action by plaintiff for patent infringement which arises under the Patent Act of 1952, 5 U.S.C. §1, et seq. Defendant has counterclaimed under 28 U.S.C. §2201-02 for a declaration of invalidity and non-infringement of the patent in suit. Jurisdiction is founded under 28 U.S.C. §1400. Venue and jurisdiction were not contested by either party.

Patent in Suit

8. The patent in suit, the Scholl Patent, is U.S. Patent No. 3,063,457, issued November 13, 1962, to Ernst Bittner and Werner Gnass, assignors to Scholl, Inc., formerly Scholl Mfg. Co., Inc., entitled "Foot Exerciser Sandals."

9. The Scholl patent in suit issued on the basis of application Serial No. 846,303, filed October 14, 1959 and claimed priority on the basis of an application No. Sch 23 704/30f Gm. earlier filed in Germany November 26, 1958, the inventors. Messrs. Bittner and Gnass being citizens of Germany.

10. The subject matter of the patent in suit is described in the introductory portion of the Specification which is quoted as follows:

> "This invention relates to improvements in foot exerciser sandals, and more particularly to sandals designed to stimulate and exercise the foot while the user is walking naturally although the invention may have other uses and purposes as will be apparent to one skilled in the art.
>
> "More specifically the invention relates to a type of sandal designed to automatically exercise the foot when the sandal is worn, and particularly when the user is walking in a natural manner."

11. The Specification adequately describes the invention as well as the manner and process of making and

using it in such full, clear, concise and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention.

12. The Specification concludes with a single claim which particularly points out and distinctly claims the subject matter which is regarded as the invention.

The single claim of the patent reads as follows:

> "A foot exerciser sandal comprising a sole block of rigid material contoured in keeping with the plantar surface of a human foot and having a depression formed therein for receiving the great toe, a transverse elevation on said block positioned to underlie the outer four toes on a foot, said elevation terminaing inwardy and abruptly adjacent the location of the great toe, strap means secured to said block in position to embrace the foot of a user in the region of the metatarsal arch, said strap means being the only means for retaining the sandal on the foot of a user, whereby gripping of said elevation by the outer four toes maintains the heel portion of the block adjacent the heel of the foot during walking."

13. The Scholl Exercise Sandal, as commercially marketed by Scholl and its related companies, embodies the invention as disclosed and claimed in U.S. Patent No. 3,063,457.

14. The disclosure and claims of the patent application as originally filed, the file wrapper record of prosecution before the Patent Office and the disclosure and single claim of the patent as issued, emphasize that the invention consists of combining in an exercise sandal having a rigid sole block contoured in conformity with the sole of the foot and retained on the foot solely by a strap, a metatarsal crest which terminates short of the great toe and a depression to receive the metatarsal head of the great toe. Apart from any question of novelty as to these individual features, their combination in a single exercise sandal synergistically develops the effect of automatically separating the big toe from the other four toes, promoting increased comfort, and affording both some anatomical advantage and some beneficial orthopedic or podiatric effect on the foot and therefore constitutes a patentable improvement.

Infringement by S. S. Kresge Co.

15. S. S. Kresge Company first became aware of U.S. Patent No. 3,063,457 as a result of the filing of the complaint in the subject lawsuit.

16. S. S. Kresge Company first sold or distributed the accused device under the name of "Olympus Exercise Sandals" approximately March 1, 1974, and has been selling them since.

17. The defendant, S. S. Kresge Company, first became aware of the plaintiff's Scholl Exercise Sandal some time in 1971 through the following buyers:

Robert Goshorn	J. T. Porter
E. H. Larson	D. A. Bass
Fred Auert	M. J. Ghastin

These individuals obtained such knowledge from disclosures of samples of the Scholl Exercise Sandal to the buyers by salesmen from Scholl, Inc. Scholl Exercise Sandals were purchased from Scholl, Inc. for resale by Kresge in the period 1971-1974.

18. Defendant, S. S. Kresge Company, did not make any patent or prior art search or investigation as to the scope and/or validity of U.S. Patent No. 3,063,457 prior to this action.

19. The accused Olympus Exercise Sandals are manufactured by Glory Products Trading Company, Ltd.

20. Glory Products Trading Company, Ltd. is a manufacturer located in Taiwan, Republic of China, and has an office and place of business at the following address:

303 Room Pai Chou Building
219 Woo-Fu 2nd Road
Kaohsiung Taiwan
Republic of China

21. Modern Shoe Company of St. Louis, Missouri, is a partnership having a regular and established place of business located at 1201 Washington, St. Louis, Missouri 63101.

22. The partners of Modern Shoe Company are Michael Mathis, Robert J. Gamm and H. A. Waltuch, all residents of St. Louis, Missouri.

23. The accused Olympus Exercise Sandals are imported by Modern Shoe Company from Glory Products Trading Company, Ltd. and are shipped from Taiwan to a Modern Shoe Company warehouse in St. Louis, Missouri, from where they are freighted on order to Defendant, S. S. Kresge Company, which company retails the accused sandals.

24. Modern Shoe Company has agreed to indemnify S. S. Kresge Company as follows:

> "Modern Shoe Company recognizes that it is obligated to and will, in fact, indemnify and hold Kresge harmless in regard to any claims of infringement made in regard to Patent No. 3,063,457 and further agrees to reimburse Kresge for any and all attorneys fees occasioned in the defense of such infringement charge including that set forth in Civil Action No. 74 C 2302. Modern Shoe Company does not wish to undertake the defense of Kresge directly in this matter."

25. Modern Shoe Company has replaced defective merchandise at the request of S. S. Kresge Company, which defective merchandise was returned by Modern Shoe Company to Glory Products Trading Company, Ltd. in Taiwan.

26. Glory Products Trading Company, Ltd. was aware of the Plaintiff's "Exercise Sandals" as a result of its President, Winston C. E. Chen travelling to Hong Kong and "attracted very much by your name 'Scholl's Exercise Sandals', brought home to (Taiwan) complete set, six pairs for study".

27. Modern Shoe Company was aware of the patent in suit, Patent No. 3,063,457, at least as early as October

and November, 1973 at which time counsel for Modern Shoe Company rendered an opinion as to validity and infringement.

28. The present action was consolidated for purposes of trial with Civil Action No. 75 C 622, Scholl, Inc. v. Glory Products Trading Company, Ltd. and in which Glory is a named Defendant.

29. In Civil Action No. 75 C 622, Modern Shoe Company was dismissed on motion for lack of venue.

30. In regard to the accused Olympus Exercise Sandals forming the basis of the present action:

a) The sandal is a foot exerciser sandal;
b) The sandal has a sole block of rigid material;
c) The sandal is contoured in keeping with the plantar surface of the human foot;
d) The sandal has a transverse elevation on the sole block positioned to underlie the outer four toes of a foot;
e) The transverse elevation terminates inwardly and abruptly adjacent to the location of the great toe;
f) The sandal has a depression formed in the sole block for receiving the great toe;
g) The sandal has strap means secured to a sole block in position to embrace the foot of a user in the region of the metatarsal arch;
h) The strap means are the only means for retaining the sandal on the foot of the user;
i) In general, gripping of the elevation by the outer four toes maintains the heel portion of the block adjacent the heel of the foot during walking.

[1] Thus, the accused Olympus Exercise Sandal manufactured by Glory Products Trading Co. Ltd., imported by Modern Shoe Company, sold by S. S. Kresge Company, provides a full and complete response to each and every structural and functional requirement of the claim contained in U.S. Patent No. 3,063,457 and the unauthorized manufacture, use and sale of such sandals is an infringe-

ment of the claim of U.S. Patent No. 3,063,457 within the meaning of the statute 35 U.S.C. 271.

31. There was no apparent dispute between the parties, nor did any witness testify that there were any structural or functional differences between the Scholl sandal as marketed and the Olympus Exercise Sandal.

Validity and Enforceability

32, The state of the prior art is represented by:

A. The sandal structures described in the patent application and in the issued patent, which includes a prior sandal substantially corresponding to the so-called Berkemann sandal, and also illustrated in the German priority document submitted to the Patent Office as part of the file wrapper.

B. The prior art references cited by the Examiner of the United States Patent & Trademark Office.

C. The prior art references not cited by the Patent Office Examiner, but cited and relied upon by the defendant in these proceedings and during the course of trial.

D. The prior public uses relied upon by Kresge in this action.

33. The following references were cited by the United States Patent and Trademark Office during the course of prosecution of application Serial No. 846,303, which matured as 3,063,457:

1,080,305	Scholl	Dec. 2, 1913
1,730,466	Mallott	Oct. 8, 1929
1,867,679	Riehle	July 19, 1932
2,096,500	McCahan et al	Oct. 19, 1937
2,167,035	Westheimer	July 25, 1939
2,217,990	Nussbaum	Oct. 15, 1940
2,518,649	Tydings et al	Aug. 15, 1950
2,539,557	Stroup	Jan. 30, 1951
2,808,662	Webb	Oct. 8, 1957

34. The following prior art references were not cited during the prosecution of the Scholl patent application in the United States Patent and Trademark Office and were relied upon by Defendant to show non-infringement and invalidity:

Patents

Country			Filed	Issued
Germany	1,775,539	Berkemann	Oct. 9, 1953	July 29, 1958
Germany	1,777,252	Sandgrens	Sept. 2, 1958	Nov. 6, 1958
U. S.	1,693,398	C. Miller	July 27, 1927	Nov. 27, 1928
U. S.	1,850,977	Musebeck	Mar. 1, 1930	Mar. 22, 1932
U. S.	2,760,281	Cosin	Feb. 17, 1954	Aug. 28, 1956
U. S.	2,381,846	Thomas	Apr. 10, 1943	Aug. 7, 1941

Publications

Your Patient and His Feet—Musebeck Shoe Company, 1941, Pages 31-32 of Catalogue illustrating various types of Berkemann prior art sandals.

Ben Levy, Pod. D., An Appliance To Induce Toe Flexion On Weight Bearing, Pages 24, 26, The Journal of the National Association of Chiropodists, Vol. 40, No. 6, June, 1950.

Richard O. Schuster, Pod. D., Modifications In The Construction Of The Levy Mould, Page 33. The Journal of the National Association of Chiropodists, Vol. 40, No. 6, June, 1950.

Ben Levy, Pod. D., Structural Changes In The Levy Mould, Page 37. The Journal of the National Association of Chiropodists, Vol. 41, No. 2, February, 1951.

35. The Defendant also relied on the prior art practices of Dr. Phillip Brachman, originally identified as Plaintiff's expert, but called during the trial as a witness for the Defendant, in modifying the so-called Levy crest or Levy Mould, by removing that portion of the Levy crest or Levy Mould extending under the great toe. Such practices occurred prior to the Bittner and Gnass invention, but involved custom molded therapeutic appliances in shoes and such teachings were never applied by Dr. Brachman to exercise sandals.

36. The following prior art was cited during the course of prosecution of counterpart applications resulting in foreign patents of Scholl, Inc. (or its subsidiaries) corresponding to the U.S. Patent in suit.

German Patent No.:
1,168,291

References Cited:

German Patent
675,858

German Gebrauschmuster
1,775,539
1,777,252

United States Patents
1,310,358
2,759,284
2,760,281
1,943,829
2,734,285

Danish Patent No.:
96,730

References Cited:

German Patents
674,569
762,446

Norwegian Patent No.:
100,282

References Cited:

United States Patent
2,760,281

Swedish Patent No.:
198,690

References Cited:

Swedish Patent
113,776

Swiss Patent
200,047

Austrian Patent No.:
233,437

References Cited:

German Patent
675,858

United States Patents
2,530,737
2,217,990
736,194

37. While the application as originally filed did not make specific reference to the German "Berkemann" patent which defendant alleges to be the most relevant prior art, neither the applicants nor their counsel misled the Examiner of the United States Patent and Trademark Office as to the status of the prior patented art or as to the inventive concept forming the basis of the disclosure and claim.

38. No fraud or deception or other unlawful or inequitable conduct was practiced or intended by the applicants for the Scholl patent or their attorneys, in connection with the application therefor or its prosecution before the United States Patent and Trademark Office.

39. The German Patent application of Bittner and Gnass was placed in the file of the U.S. Patent and Trademark Office and receipt thereof was formally acknowledged by the Patent Office Examiner in the file wrapper. The drawings of that German application contain Figure 1 to show the Berkemann prior art sandal.

40. Without specifically naming "Berkemann," the application as originally filed gave, and the patent as issued gives, a general description of the art and a description of the Berkemann prior art sandal (Appln. file wrapper, Def's. Ex. 13(a), p. 2; U.S. Patent No. 3,063,457; Pltff's. Ex. 1, Column 1, lines 34-38) as stated by the Court (Trial Transcript pp. 163-64):

"The Court: Look at the last paragraph on that page.

"'Exercising Sandals of the type of the instant invention are provided with a generally transverse

bulge or elevation in the forward portion thereof which is successively gripped and released by the toes during walking.'

"That is a general description of this kind of exercise sandal.

" 'In prior construction this transverse elevation extended across the entire width of the sole block of the sandal. Such construction automatically gave the great toe of the foot a wrong position anatomatically which frequently aided the formation of crooked toes or aggravated the condition of hallux valgus rather than alleviate or prevent such disorder. Prior known forms of exercising sandals are also objectionable in that they were not desirably comfortable, not as durable as wanted, were frequently, objectionably heavy, and did not provide proper toe-spreading when needed.'

"That's got to be about as specific a description of Berkemann without saying Berkemann as you can get."

41. The best prior art, according to the defendant's expert witness, Charles O. Pigott, Jr., was Berkemann modified in view of the Stroup Patent, U.S. No. 539,557, also a file wrapper reference cited by the Examiner during the course of prosecution. (TT 187).

42. Mr. Pigott admitted that "Stroup by itself would certainly not anticipate the invention" and "would have relevance only when combined with something like Berkemann" (TT 189), a proposed combination which is not taught by Stroup (TT 190).

43. The prior art references not cited during the prosecution of the Scholl patent in the United States Patent Office and relied on by the defendant in support of its allegation of invalidity are not significantly better than those references which were either cited by the United States Patent Office during the course of the prosecution of the patent application, or were before the Examiner as a part of the contents of the file wrapper, to-wit, the description of the Berkemann sandal in the Specification and

the illustration of the Berkemann sandal in the drawings of the German priority document.

44. The prior art cited by the United States Patent Office as well as the prior art cited by the defendant, whether such prior art is considered singly or in combination with one another, does not anticipate the invention as disclosed and claimed.

45. Although individual features and elements occur in various showings of prior art footwear, the Scholl Exercise Sandal has been shown to be a novel and useful combination of elements having a unique interdependent functional relationship, thereby affording a synergistic result which in and of itself was non-obvious, namely, the automatic separation of the great toe from the other four toes, resulting in some anatomical advantage and beneficial orthopedic or podiatric effects on the foot as well as promoting increased comfort.

46. The differences between the prior art and the claim of the patent reside in the combination of a metatarsal crest which underlies the four lesser toes, but terminates short of the great toe, and a depression to receive the metatarsal head of the great toe, both features being provided in a contoured rigid sole block having a strap means as the sole means of retaining the sandal on the foot. That combination constitutes a patentable improvement over the prior art.

47. The differences between the subject matter as disclosed and claimed in the patent in suit and the prior art are such that the subject matter as a whole would not have been obvious at the time the invention was made to a person having ordinary skill in the art to which such subject matter pertains.

[2] 48. The level of skill pertinent to an interpretation of Section 103 is the level of skill of a person having ordinary skill in the art and who is practicing the art to which the patented subject matter pertains at the crucial time of the invention.

[3] 49. In the sandal art to which the sandal of the patent in suit relates, a general knowledge of the human foot, which may be acquired through experience by people manufacturing foot appliances to relieve and correct afflictions of the foot and types of footwear beneficial to the foot including the value of properly exercising the foot, is the generally required level of skill. The requisite level of skill is attained by podiatrists and other practitioners who investigate and treat disorders of the feet and is attained, if not surpassed, by orthopedic and podiatric surgeon specialists.

50. The level of ordinary skill in the exercise sandal art is surpassed by experts of the extraordinary and superior skills exemplified by the medical experts presented by the parties to assist the court, to-wit, Dr. Carroll B. Larson, a renowned orthopedic expert, and Dr. Phillip Brachman, a similarly renowned podiatrist. Significantly, both experts recognized that the patented Scholl Exercise Sandal embodies structural differences over other prior art exercise sandals including Berkemann with which they were familiar, which structural differences provide a high level of comfort and some anatomical advantage and some beneficial orthopedic or podiatric effect. Dr. Brachman, who was called by defendant, stated that in his opinion the difference between Berkemann and the patent in suit and the advantages of the latter would not be obvious to one of ordinary skill in the art of footwear manufacture nor even to orthopedic surgeons or podiatrists unless they were familiar with the special research which he had done on the functioning of the human foot.

51. There are no file wrapper estoppels which preclude reading the requirements of the patent claim on the structure and function of the accused Olympus Exercise Sandal, or which preclude the conclusion that the Scholl Exercise Sandal follows the patent.

52. From the beginning of prosecution to final allowance, the Examiner repeatedly urged the applicants to reduce the number of claims and finally specified (File Wrapper, p. 60) that one or two claims would be reasonable to define the invention. There is nothing in the file

wrapper to indicate that the Examiner ever concluded that the basic combination as ultimately claimed was *not* a patentable combination.

53. The notice of appeal filed after an interview was apparently a formality only, merely as a safeguard for meeting a statutory due date prior to formal allowance of the application by the Examiner.

Sales Volume of the Scholl Exercise Sandal

54. Scholl Exercise Sandals manufactured and sold by Scholl embody the invention as disclosed and claimed in U.S. Patent 3,063,457.

55. From 1968 through June 1976 the plaintiff sold and distributed 9,056,000 pairs of such Scholl "Exercise Sandals" in the United States.

56. In other parts of the word, Scholl Exercise Sandals manufactured in accordance with the patent in suit have been sold in the following quantities:

Country	Sales of Scholl Exercise Sandals in Units (pairs) from 1964-June 1976
United Kingdom	11,783,300
Australia	1,579,000
Austria	5,754,000
Belgium	279,000
Denmark	179,800
Finland	342,000
France	2,505,000
Germany	3,539,000
Ireland	350,300
Italy	2,698,000
New Zealand	139,000
Norway	58,900
South Africa	291,000
Spain	266,000
Sweden	928,000
Switzerland	1,587,000
SUB-TOTAL	32,279,300

	From 1969 through June 1976
Canada	13,280,000
	From 1974 through June 1976
Argentina	24,000
Mexico	20,000
Venezuela	140,000
SUB-TOTAL	45,743,300
	From 1968 through June 1976
United States	9,056,000
GRAND TOTAL	54,799,300

Conclusion of Law

1. The Court has jurisdiction of the parties and the subject matter under 35 U.S.C. §1 et seq.; 28 U.S.C. 1338 and 28 U.S.C. §§2201-02 and venue is proper under 28 U.S.C. 1400.

Infringement

[4] 2. As applied to a patent, infringement is the unauthorized making, using or selling for use or for profit of an invention covered by a valid claim of a patent during the life of the patent. 35 U.S.C. §271; Unit Construction Co. v. Hershey Mfg. Co., D.C. Pa., 241 F. 129 (1917); 69 CJS Patents 282.

3. The infringement of a patent may consist of any one, two or all three of the acts of making, using or selling the patented invention without the authority of the patent owner. 69 CJS Patents 286; Schiff v. Hammond Clock Co., 69 F.2d 742, 21 USPQ 308 (7th Cir. 1934).

[5] 4. In determining whether an accused device or composition infringes a valid patent, resort must be had in the first instance to the words of the claim. If accused matter falls clearly within the claim, infringement is made out and that is the end of it. Graver Tank Mfg. Co., Inc. v. Linde Co., 339 U.S. 605, 607, 585 USPQ 328, 330 (1949).

[6] 5. In determining infringement, the accused structure is to be compared to the language of the claim of the patent and not with any particular embodiment or with the patentee's commercial structure. S. S. Kresge Co. v. Davies, 112 F.2d 708, 46 US.PQ 116 (8th Cir. 1940); CTS Corp. v. Piher International Corp., 188 USPQ 419, 423 (7th Cir. 1975), cert. denied, 189 USPQ 384 (1976).

[7] 6. A patent may be infringed where the essential or substantial features of the patented invention are taken or appropriated, or the device alleged to infringe is substantially identical with the patented invention, even though there are some differences in form or variations in form or variations in detail, as mere colorable departures do not avoid infringement.

[8] 7. While the claims of a patent limit the invention, and specifications cannot be utilized to expand the patent monopoly, Burns v. Meyer, 100 U.S. 671, 672 (1880); McCarty v. Lehigh Valley RR., 160 U.S. 110, 116 (1895), it is fundamental that claims are to be construed in the light of the specifications and both are to be read with a view to ascertaining the invention. Seymour v. Osborne, 11 Wall. 516, 547 (1871); Schriber-Schroth Co. v. Cleveland Trust Co., 311 U.S. 211, 47 USPQ 345 (1940); Schering Corp. v. Gilbert, 153 F.2d 428, 68 USPQ 84 (1946); United States v. Adams, 383 U.S. 39, 49, 148 USPQ 479, 482-483 (1965).

8. The manufacture, use and sale of the Olympus Exercise Sandal manufactured by Glory Products Trading Co., imported by Modern Shoe Company and sold by S. S. Kresge Company is an infringement of the claim of U.S. Patent No. 3,063,457 and the invention defined thereby.

Validity

[9] 9. As in every patent case, there is here a presumption that the patent in suit is valid. The burden of establishing invalidity rests on the defendant. 35 U.S.C.A. §282. Helms Products v. Lake Shore Mfg. Co., 227 F.2d 677, 680, 107 USPQ 313, 314-315 (7th Cir. 1955); Copease Mfg. Co. v. American Photocopy Equipment Co., 298 F.2d 772, 777, 132 USPQ 87, 91-92 (7th Cir. 1961).

[10] 10. The 1952 Patent Act, 35 U.S.C. §§1-293, sets out the conditions of patentability in three sections indicating that patentability is dependent upon three explicit conditions: novelty and utility as articulated and defined in section 101 and section 102, and non-obviousness, the statutory formulation as set out in section 103, Graham v. John Deere Co., 383 U.S. 1, 12, 148 USPQ 459, 464-465 (1965).

[11] 11. Under section 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or non-obviousness of the subject matter is determined. Graham v. John Deere, 383 U.S. 1, 17, 148 USPQ 459, 466-467 (1965).

[12] 12. Secondary considerations such as commercial success, long-felt but unsolved needs, failure of others, etc., may be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented. As indicia of obviousness or non-obviousness, these inquiries may have relevance. Graham v. John Deere Co., 383 U.S. 1, 17, 18, 148 USPQ 459, 466-467 (1965).

[13] 13. To be patentable, a combination of elements must produce something more than the sum of the pre-existing elements; there must be a synergistic result that is itself non-obvious. Anderson's Black Rock, Inc. v. Pavement Salvage Co., Inc., 396 U.S. 57, 61, 163 USPQ 673, 674-675 (1969); Sakraida v. Ag Pro Inc., 425 U.S. 273, 282, 189 USPQ 449, 452-453 (1976).

[14] 14. A novel combination of old elements which so cooperate as to produce a new and useful result or a substantial increase in efficiency is patentable. Lewyt Corporation v. Health-Mor, Inc., 181 F.2d 855, 857, 85 USPQ 335, 336-340 (7th Cir. 1950); Helms Products v. Lake Shore Mfg. Co., supra at 681, 107 USPQ at 315-316; Weller Mfg. Co. v. Wen Products, Inc., 231 F.2d 795, 798, 109 USPQ 73, 74-75 (7th Cir. 1956); Mojonnier Dawson Co. v. United States Dairy Sales Corp., 251 F.2d 345, 116 USPQ 106 (7th Cir. 1958); Copease Mfg. Co. v. American Photocopy Equipment Co., supra.

[15] 15. Since the "level of ordinary skill" in a particular art has not usually been defined in writing, the usual way of determining such level is by referring to the subjective reaction of a person thoroughly familiar with the particular art and, if possible, one who practiced the art at the crucial time in question. Malsbary Mfg. Co. v. Ald, Inc., 171 USPQ 7 (7th Cir. 1971).

[16] 16. Not a single person having ordinary skill in the art testified that the Scholl patented invention was obvious at the time it was invented in 1958. In this regard, the defendant presented testimony by a patent lawyer, who admittedly was not an expert in the art of designing and manufacturing footwear at the time of the invention, that the invention was obvious in light of prior art which was before the Patent Office. The Court of Appeals for the Seventh Circuit has noted its reluctance to rely solely on the testimony provided by a patent lawyer who was not an expert. National Dairy Products Corp. v. Borden Co., 394 F.2d 887, 890, 157 USPQ 227, 229-230 (7th Cir. 1968). The conclusion of defendant's witness is entitled to little or no weight, CTS Corp. v. Piher International Corp., 184 USPQ 399, 402 (D.C. Ill. 1974), affirmed. 188 USPQ 419 (7th Cir. 1976), cert. denied, 189 USPQ 384 (1976), particularly in light of the testimony of Dr. Brachman reflected in Finding of Fact Number 50.

17. The combination defined in claim 1 of U.S. Patent No. 3,063,457 and embodied in the Scholl Exercise Sandal, produces a new and useful result, to-wit, an anatomical advantage, greatly increased comfort and some beneficial orthopedic or podiatric effect on the foot, that itself was not obvious. Anderson's Black Rock, Inc. v. Pavement Salvage Co., Inc., 396 U.S. 57, 61, 163 USPQ 673, 674-675 (1969); Sakraida v. Ag Pro Inc., 425 U.S. 273, 282, 189 USPQ 449, 452-453.

18. Tht invention embodied in the Bittner and Gnass patent in suit is a new combination of old elements which

produced a new and improved result and which was not obvious to one having ordinary skill in the art.

[17] 19. The conclusion of non-obviousness is buttressed by the evidence relative to the secondary tests to be considered as set forth in Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459, and repeated in Trio Process Corp. v. L. Goldstein Sons Inc., 461 F.2d 66, 174 USPQ 129 (3rd Cir. 1972), cert. denied, 409 U.S. 997, 175 USPQ 577 (1972). These tests include commercial success, filling a long-felt need, failure of others to develop the invention and copying by others.

20. U.S. Patent No. 3,063,457 is valid and the claim thereof is infringed. The plaintiff, Scholl, Inc., is entitled to judgment including an injunction under 35 U.S.C. §283 and to damages under 35 U.S.C. §284 and to an award of costs.

21. Every conclusion of law which is deemed a finding of fact is hereby adopted as a finding of fact.

APPENDIX C

Page of Record

351 The Court: So that I am satisfied, again, as I said, that there is a difference and it is a significant difference, that there is in fact invention, or there is in fact novelty, and usefulness, and significant novelty and significant usefulness.

Now, whether or not there is invention depends on obviousness. So far, I guess I really have Dr. Brachman's testimony that it was obvious but he wouldn't think it would be obvious to a person skilled in the art because the function, the working of the foot is not that well understood, so that Mr. Berkemann should have known better than to put that ridge under the big toe when he designed the Berkemann sandal, and it wouldn't have been obvious to Messrs. Bittner and Gnass if they were just ordinarily skilled in the art, or steeped in the traditional concepts of how the foot works, and the big toe comes down last, and so forth.

Mr. Van Santen: There is one other interesting case you may want to refer to, your Honor, and that is
352 Court of Customs and Patent Appeal case in re: Earl Steinmeyer. It is reported at 41 USPQ 24.

In that case it was a question of putting on a lightning arrester.

The Court: What year, Mr. Van Santen?

Mr. Van Santen: 1939. It was a question of putting a glass in a lightning arrester so you could see when the thing had failed, and the question was directly to obviousness because the argument was that the use of glass should have been obvious because everyone knew that you could use glass to see through.

The Judge that wrote the decision here for the CCPA, said, "A part of the inventive concept was the idea of rendering visible at a distance, the operative condition of a lightning arrester, and when a glass housing was utilized for that purpose the invention became complete and it

is immaterial that the use of glass to complete the invention would be obvious to one who had formed the original concept."

So, I suggest the analogy there is, you know the original concept of having a toe come down, but it still took somebody to invent the sandal.

The Court: No, you see the difficulty and the difference between that and this is that in that, the original concept is to devise something which you can see whether or not it is functional.

353 That is, you know, now you are talking about a different kind of lightning arrester. I take it that all the old lightning arresters you couldn't see whether or not it had been shorted out, or whatever it was that happened to a lightning arrester when it malfunctions.

So, what you are trying to figure out is how do you devise a lightning arrester which by visual examination you can ascertain is, in fact, in operating condition. So, once having decided you wanted to do that, which is the invention, you figure out the way to do it is with glass because you can see through glass.

That is not what we are talking about. We are not talking about how do you figure out how you can make a comfortable sandal in which the big toe is depressed, and therefore, you make one where the big toe is depressed. That is not it.

We are talking about what do you do with the Berkemann design if you had it in front of you which I have to assume Bittner and Gnass had, because they were in Germany and this was a German sandal which was a German sandal which was being sold in substantial quantities, and they look at it and say well, this is a pretty good sandal, but what do we do to improve it, and they come up with this, which as Dr. Brachman says, is anatomically correct.

But, I don't think that means, as Mr. Alexander

354 suggests, they just accidentally happened on an anatomically correct sandal when they set out to improve Berkemann.

I think it is a very close question whether it is obvious. I really do. I really do, whether it would have been obvious

or not, because while Dr. Brachman said it wouldn't have been obvious if you didn't know as much as he knows about how the foot works, he also says that as a matter of fact, however you think the foot works you ought to end up with a depression for the big toe because the big toe ends up normally in a position, or should end up normally in a position which is lower on the underside than the other four toes.

If you walk in the sand your big toe will make a deeper hole than the other four toes. They are level across the top, but the big toe, because it is thicker, makes a deeper indentation in the sand than the other four toes do.

If you know that, you ought to make the sandal in which the big toe has a depression in which to rest without regard to whether or not you think it goes down first or you think it goes down last, or they all go down together.

If you want to make one that contours to the foot and the big toe in its normal weight bearing position, in a soft surface it will be lower. If you just had somebody stand in the sand and you say, I want to make a sandal that conforms to the contour of the foot in a weight bearing position, you will make a sandal with a depression for the

big toe deeper than the level of the surface for the

355 other four toes.

Mr. Van Santen: I don't think that is exactly the way you proceed because people don't live in the sand. We live on hard surfaces.

The Court: But isn't the objective, isn't it desirable to attempt to design footwear so that it permits the foot to function in as normal a fashion as possible, and isn't the most normal fashion the way you would walk on soft surfaces rather than hard surfaces?

Am I wrong about that, Dr. Brachman?

Mr. Van Santen: I think Dr. Brachman should answer rather than me. Doctor, did you hear the question?

Dr. Brachman: There is a great deal of difference between walking on hard surfaces and soft surfaces.

The Court: I know that.

Dr. Brachman: We don't walk on soft surfaces.

The Court: But if you can design footwear so as to have the foot assume the weight bearing position which

it would have on a soft surface, isn't that better than having it flattened out where it is in a, what you might say, distorted position by virtue of the hardness of the surface? Am I wrong about that?

Dr. Brachman: No, I think there is some misconception there, your Honor.

The Court: Go ahead. Straighten me out.

356 Mr. Van Santen: Do you want him to come up a little closer?

The Court: What is my misconception?

Dr. Brachman: Because we walk on hard surfaces, we must design footwear that will be normal for the foot on hard surfaces, and we can't even think about the fact that we at times used to walk on soft surfaces; therefore, we must design the type of footwear where the toe, where the foot will function and it will bring about the same amount of pressure, but what will happen to it when it hits the hard surface, this is what we have to think about.

The Court: I understand that, but you said this design was anatomically sound.

Dr. Brachman: Correct.

The Court: Among the reasons being there is a depression for the big toe which permits it to get a lower level on the bottomside than the other four toes.

Dr. Brachman: It needs that to function normally.

The Court: That is what would happen if you step in the sand. Your big toe would be at the same plane on the top surface, and would be on a lower plane on the bottom surface because it is thicker. Isn't that right?

Dr. Brachman: Your Honor, I really can't answer that because I have studied walking in sand in Southern Portugal, the clam diggers, and I have taken pictures of them, and actually, there was no difference between

357 the amount of digging they did in the sand with their lesser toes than the big toe.

The sand is soft. You just went all the way down.

The Court: I am not talking about digging. I am talking about just standing in a weight bearing position.

Dr. Brachman: Then there wouldn't be much weight on the big toe at all if you are just standing.

The Court: There wouldn't be?

Dr. Brachman: No, mostly on the heel and metatarsal head. It would not be on the toes.

The Court: And the big toe wouldn't make a deeper depression than the other four toes?

Dr. Brachman: No, sir.

The Court: I am going to check this the next time I am on the sand, which won't be soon.

Dr. Brachman: You will find it true though.

The Court: If you were to ask me my recollection, my recollection is that having looked at my footprint in the sand from standing, that the big toe did in fact make a deeper depression than the other four toes.

Dr. Brachman: You can have your big toe do it if you work your big toe down.

The Court: No, I am talking about normal standing.

Dr. Brachman: No. Normal standing it would be distributed fairly evenly along the whole foot. We are talking now on a takeoff which is different than normal.

358 The Court: What you are really telling me, this is anatomically more correct not for the simple standing position, but walking.

Dr. Brachman: Function, walking. I am not interested in standing anyhow. I am not, personally, because that is static. I am interested in the dynamic function of the foot.

The Court: As an exerciser.

Dr. Brachman: That's right. Dynamics.

The Court: You aren't going to get any exercise standing still. I recognize that.

You are satisfied, that given the average designer's knowledge of how the foot works, it wouldn't have been obvious to take that Berkemann patent and design the Scholl patent?

Dr. Brachman: That is my interpretation.

The Court: Okay. You have looked at them both, I take it?

Dr. Brachman: Yes, I have. In fact, I have put them on, too. I have tried them. I tried to do some functioning with them, not a great deal, but to some extent.

The Court: I am persuaded that this one is better than the Berkemann in terms of comfort, and some anatomical, or therapeutic, orthopedic benefit, improvement.

I take it you agree with that too?

359 Dr. Brachman: Oh, yes.

The Court: Okay, Mr. Alexander, I am disposed to conclude this wasn't an obvious improvement. In fact, this is novel, useful, and non-obvious, and that therefore, it is a valid patent.

I am disposed to conclude that the device is manufactured consistent with the specifications and claims of the patent, and that your client's product infringes.

Unless you see some real purpose to be served in filing post trial briefs, I am prepared to decide the case on the basis of the record and my conclusions, as just expressed.

Mr. Alexander: Your Honor, could I ask the witness about two questions?

The Court: You certainly may because I am most interested in getting at the ultimate proof, and I think the most difficult question is the question of obviousness, as I have indicated several times.

Mr. Alexander: Dr. Brachman, I believe in your particular, well, I am going to take off where you left off.

The Court: Go ahead.

Mr. Alexander: Because I think this is important, the whole thing.

Has it been known for a long time this idea of keeping the big toe effectively lower than the other toes?

360 Dr. Brachman: I didn't hear the first few words.

The Court: Has it been known for a long time that it was desirable to keep the big toe effectively lower than the other four toes?

Dr. Brachman: I don't think that that is a very knowledgeable, obvious conclusion for the members of my profession. That is the way I can answer that.

The Court: I gather that, in fact, neither shoes nor sandals have historically been manufactured with that feature, right, with the big toe lower than the other four?

Dr. Brachman: No, they haven't.

The Court: In fact, I bought a pair of shoes. I made my own hole for the big toe in every pair of shoes I bought. I looked at my own shoes, and by God, there was a hole there.

I can remember I sold Nettleton Shoes when I was at the University of Chicago, and their proud boast was that they were flat on the bottom rather than curved or concave, as a lot of, what we said cheaper made shoes were.

It took special manufacturing skill, and we used to put a pencil across the bottom to show how flat they were, and we operated on the assumption that that was a mark of quality to have a shoe with a flat sole, and Nettleton's, for years, prided themselves on the fact that they had flat soles, flat inserts, and flat outer soles, bottom soles.

So, I think you are right that at least in the
361 Thirties it was not known that it was desirable to have a contoured insole, or contoured sole, although I can remember sole inserts which were contoured so that there was a depression for the big toe.

Dr. Brachman: And yet, there are some manufacturers, your Honor, that put in a filler between the insole and the outer sole that had some flexibility so the foot could become depressed where it wanted to be depressed for normal function.

The Court: Yes, Massagic.

Dr. Brachman: Massagic was one of them, right.

Mr. Alexander: Your Honor, I have no more of the witness and we would prefer your ruling from the bench. That would be fine.

The Court: I think I am satisfied that the evidence has demonstrated, to my satisfaction, that the prior art does not anticipate the Bittner-Gnass design; that that design is useful it is novel, and it would not have been obvious to one with ordinary skill at the time they developed their structure.

Therefore, I conclude that they have a valid patent.

I conclude, second, that the commercial sandal is manufactured consistent with the specifications and claims of that patent.

I conclude, third, that the accused devices are identical, or substantially identical. They were intended to be Taiwan copies of the patented sandal, and that
362 therefore, they infringe.

So, I find that the patent is valid and infringed.

Now, that leaves us the question of relief.

Mr. Van Santen: Also, your Honor, we need some sort of reaction of the Court in terms of Glory Products Trading Company because I think it is active inducement of infringement.

The Court: I don't find any extraordinary relief warranted in this case.

Mr. Van Santen: No, it is not extraordinary. It is just 271(b) instead of 271(a).

The Court: No question that Glory made these.

Mr. Van Santen: And they induced infringement in the United States by making them and selling them.

The Court: And I think they clearly did induce infringement in the United States.

They first attempted to sell to Scholl, and then they subsequently sold to other people, Modern Shoe. So, they induced infringement in the United States. I don't have any difficulty with that.

I do have some difficulty with any concept of willful, deliberate, knowing infringement by Kresge.

Kresge might reasonably have thought this device—I had enough trouble deciding it wasn't and obvious modification of Berkemann, so if Kresge had been knowledgeable, which I don't guess they were, but if they had done the kind of patent search Mr. Alexander did,
363 and you did when it came to prepare for the trial of this case, they may very well have had a reasonable basis for concluding there wasn't infringement of a valid patent.

So, I am not going to make any findings of willful. I think it is even less than willful because at the time I don't think they knew what the patent situation was.

I don't even see a patent marking on this sandal, as a matter of fact.

Mr. Van Santen: I don't believe we marked the patent number on the sandal.

The Court: I don't see any patent marking on the sandal at all.

Mr. Van Santen: Mr. Eiseman says it is on the box.

The Court: I assume it probably was. I have seen these sold without boxes, however, I must say and there is no patent marking on the sandal.

Mr. Van Santen: That hasn't been an issue in this case.

The Court: I understand, but when you are talking about willful, then it gets to be an issue. If the sandal is marked, anybody looking at the sandal will know it is patented. On the other hand, Kresge was a customer and should have had some knowledge whether Scholl was at least claiming patent. But, I don't think it adds up
364 to willful in any event.

Now, do you want to prepare some written findings based on the oral findings I have made, or just let the record stand on the basis of what I have found?

Mr. Van Santen: No, I think with your Honor's indulgence, I think it might be desirable from our standpoint, to possibly prepare some additional findings in light of your conclusions.

The Court: Some preliminary findings?

Mr. Van Santen: I want to make sure everything conforms with the requirements of Graham v. Deere.

The Court: I do too. I have no desire to be told that I decided the case on the wrong grounds, because I am satisfied.

Mr. Van Santen: What I propose is, I prepare such findings and submit them to Mr. Alexander for his approval as to form.

The Court: Okay, and get me a judgment order too.

Mr. Van Santen: Yes.

The Court: What are we going to do about relief?

Mr. Van Santen: I suppose that will require an accounting.

The Court: I guess it will require something.

Mr. Alexander: Well, your Honor, there will be an appeal of this case first, of course.

The Court: Maybe I should write a long opinion so the Court of Appeals understands it.
365 The only time I have been reversed in a patent case in 15 years, is when I just made finding of fact and conclusions of law and they never did understand why I decided the way I did.

They were really very explicit findings of fact and conclusions of law, but either they didn't read them, and they don't read as easily as a narrative opinion reads, number one, and number two, number three—16 findings of fact.

Mr. Van Santen: Could the comments from the bench be—

The Court: I think they should be. They really amount to my opinion, and therefore, I don't feel such a great urge to write an opinion in this case, but I do have to make findings of fact.

I am prepared to let what I have said from the bench be findings of fact, and I am prepared to enter more extensive and explicit findings of fact, if you like, and I would like you to prepare them. Enter judgment order with each case.

Mr. Van Santen: Mr. Alexander doesn't represent Glory Products, so I will have to assume that is my responsibility.

The Court: Yes, but I am talking about the Kresge case.

Actually, those findings of fact should all be applicable to Glory Products, but there will be some additional findings of fact as to Glory Products. So, if you get his comments on the Kresge case they will also be relevant to the Glory Products case. To the extent that they are applicable, I think they will all be applicable.

366 Glory Products has some additional findings about inducement. Everything else we have defined in Glory Products anyhow.

Mr. Van Santen: Yes. It is the same product.

The Court: Yes, so we have to make the same findings with respect to validity and infringement and novelty, and usefulness obviousness, the whole business.

All right, gentlemen, as usual I have enjoyed this patent case, and as usual I end up with some caveats about the patent system and its day to day operation.

I suspect that if the Patent Office had considered Berkemann in the process of issuing the patent, Mr. Alexander might never have been here, although maybe I am

wrong about that. But, the fact that they didn't, certainly gave him a legitimate reason for vigorously defending the question of validity.

How soon are you going to get me these findings, Mr. Van Santen?

Mr. Van Santen: Let's see, it is Christmas.

The Court: I don't think you ought to work on them Christmas Eve or Christmas Day, but other than that I don't know why you shouldn't work on them. These are findings in support of a judgment in your favor. I would think you ought to be anxious to get them entered as quickly as possible.

367 Mr. Van Santen: I am, and I will. I would suggest within 10 days, your Honor.

The Court: That is all right. Ten days from today would be Sunday, the 2nd. Saturday is the 1st.

Mr. Van Santen: I have to be in Minneapolis on the 4th. Could we make it—

The Court: Do you want to let Mr. Alexander—

Mr. Van Santen: Mr. Alexander wants a chance to look at them.

Mr. Alexander: I will be gone until January 2nd, your Honor.

The Court: Until then?

Mr. Alexander: Right.

The Court: I understand, but you will have the week of the 3rd to look at them. If I make it the morning of the 7th, isn't that all right?

Mr. Alexander: Fine.

Mr. Van Santen: That will be all right.

The Court: 10:00 on the 7th to enter findings of fact and conclusions of law and judgment order.

Mr. Van Santen: Thank you, your Honor.

• • •

APPENDIX D

Nov. 13, 1962 E. BITTNER ETAL 3,063,457

FOOT EXERCISER SANDALS

Filed Oct. 14, 1959 3 Sheets-Sheet 1

Fig. 1

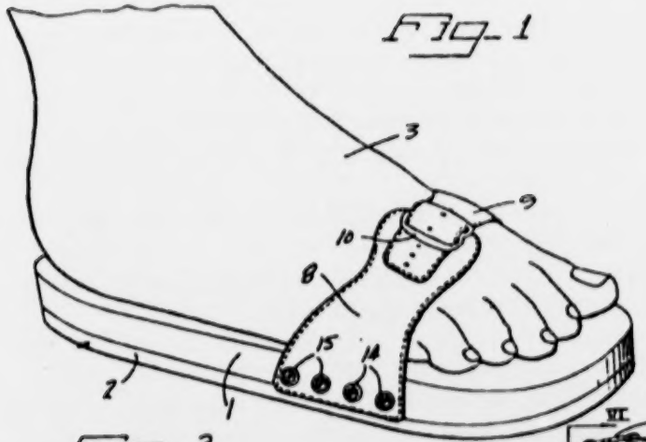


Fig. 2

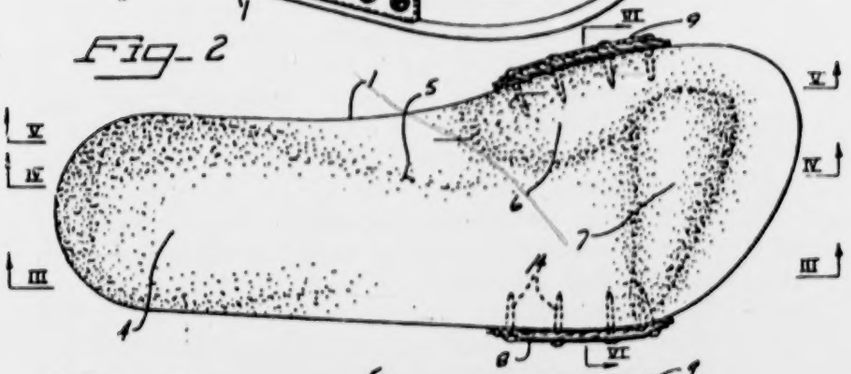


Fig. 3

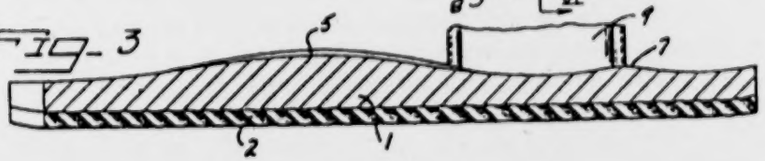
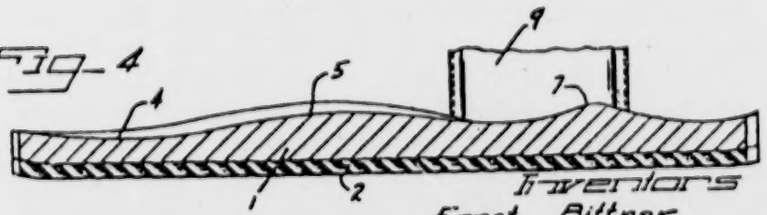


Fig. 4



Inventors
Ernst Bittner
Werner Gnass

by Hill, Sherman, Meroni, Gross & Simpson Attys.

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FOOT EXERCISER SANDALS

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Fig. 5

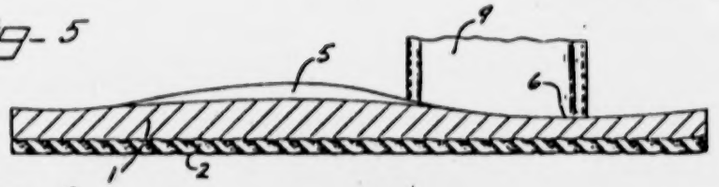


Fig. 6

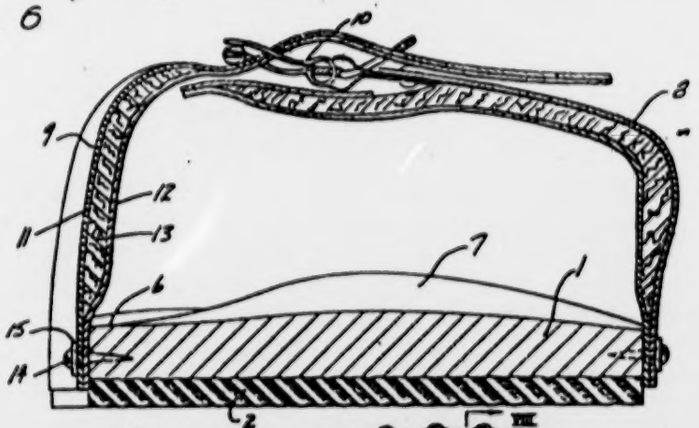


Fig. 8

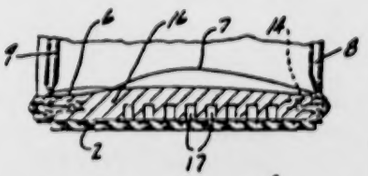
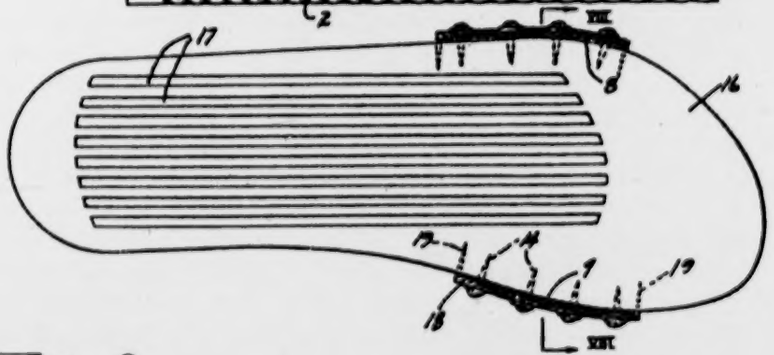


Fig. 7



Inventors
Ernst Bittner
Werner Gnass

by Hill, Sherman, Meroni, Gross & Simpson Attys

Nov. 13, 1962 E. BITTNER ETAL 3,063,457

FOOT EXERCISER SANDALS

Filed Oct. 14, 1959 3 Sheets-Sheet 3

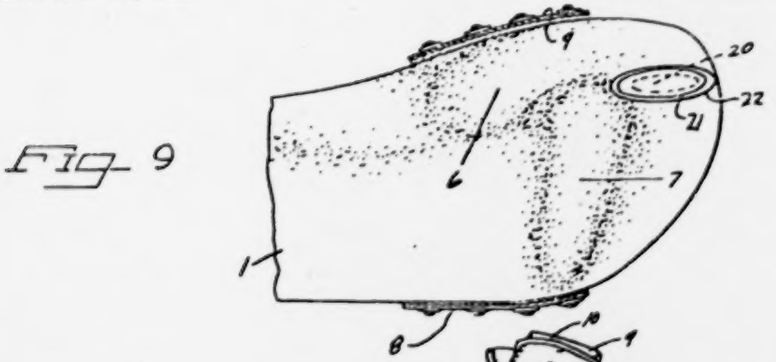


Fig. 9

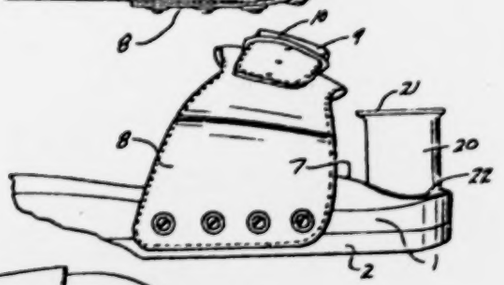


Fig. 10

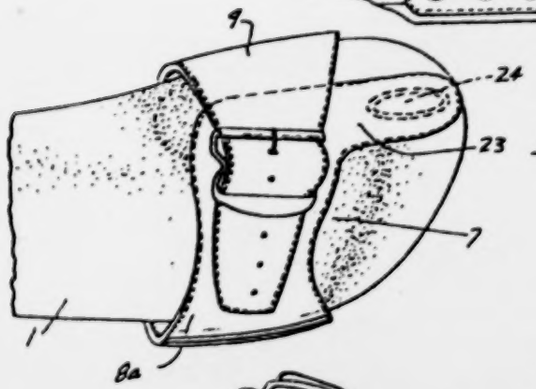


Fig. 11

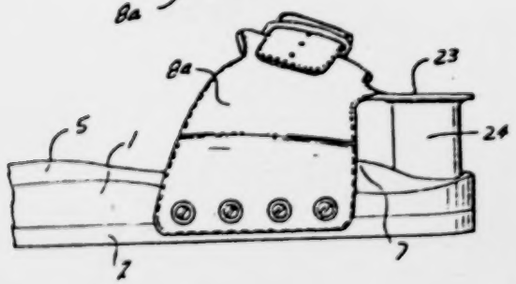


Fig. 12

Inventors
Ernst Bittner
Werner Gnass

by Hill, Sherman, Meroni, Gross & Simpson Attys

UNITED STATES PATENT OFFICE

3,063,457

Patented Nov. 13, 1962

3,063,457

FOOT EXERCISER SANDALS

Ernst Bittner, Frankfurt am Main, and Werner Gnass, Frankfurt am Main Niederrad, Germany, assignors to The Scholl Mfg. Co., Inc., Chicago, Ill., a corporation of New York

Filed Oct. 14, 1959, Ser. No. 846,303

Claims priority, application Germany Nov. 26, 1958

1 Claim. (Cl. 128—615)

This invention relates to improvements in foot exerciser sandals, and more particularly to sandals designed to stimulate and exercise the foot while the user is walking naturally although the invention may have other uses and purposes as will be apparent to one skilled in the art.

More specifically the invention relates to a type of sandal designed to automatically exercise the foot when the sandal is worn, and particularly when the user is walking in a natural manner. The use of the sandal results in restoring or improving the toe gripping action of the foot, a function frequently lost wholly or partially as a result of wearing shoes that constrict natural foot motion and toe freedom. As a result of wearing the sandal, the entire structure of the foot is strengthened, and arch sag and stiffened joints are relieved and corrected by reactivation and revitalization of weakened muscles in the feet and strained ligaments, circulation of the blood is stimulated and increased through the foot eliminating a condition of constant cold feet due to decreased circulation of the blood in the lower extremities, calluses on the ball of the foot gradually disappear as a weakened

metatarsal arch becomes stronger and the normal strength, suppleness, and elasticity of the foot is restored.

Exercising sandals of the type of the instant invention are provided with a generally transverse bulge or elevation in the forward portion thereof which is successively gripped and released by the toes during walking. In prior constructions, this transverse elevation extended across the entire width of the sole block of the sandal, and such construction automatically gave the great toe of the foot a wrong position anatomically which frequently aided the formation of crooked toes or aggravated a condition of hallux valgus rather than alleviating or preventing such disorder. Prior known forms of exerciser sandals were also objectionable in that they were not desirably comfortable, not as durable as wanted, were frequently objectionably heavy, and did not provide proper toe spreading when needed.

In view of the foregoing, it is an important object of the instant invention to provide an exerciser sandal so contoured as to automatically cause an anatomically correct positioning of the toes when the sandal is put on.

Another object of the invention is the provision of an exerciser sandal having a sole block contoured in keeping with the plantar surface of a foot and provided with a generally transverse elevation in the forward portion to be gripped by the toes of a user, which elevation does not extend beneath the great toe.

Another feature of the instant invention is the provision of a foot exerciser sandal having a contoured sole block with a transverse elevation in the forward portion thereof to be gripped by the toes of a user, the elevation terminating short of the great toe, and the block having a depression therein to receive the metatarsal head of the great toe, thus causing an automatic separation of the toes, preventing the formation of crooked toes, and alleviating or counteracting conditions such as hallux valgus.

A further object of this invention is the provision of a foot exerciser sandal especially constructed for lightness in weight while giving rigid support to the foot.

Still another object of this invention is the provision of a durable and economical foot exercising sandal equipped with toe spreading means.

While some of the more salient features, characteristics and advantages of the instant invention have been above pointed out, others will become apparent from the following disclosures, taken in conjunction with the accompanying drawings, in which—

FIGURE 1 is a fragmentary perspective view of a foot exerciser sandal embodying principles of the instant invention, showing the same in operative position upon the foot of a user;

FIGURE 2 is a plan sectional view of the sandal taken just above the sole block, illustrating the sole block in plan;

FIGURE 3 is a fragmentary vertical sectional view taken substantially as indicated by the line III—III of FIGURE 2, looking in the direction of the arrows;

FIGURE 4 is also a fragmentary vertical sectional view taken substantially as indicated by the line IV—IV of FIGURE 2;

FIGURE 5 is a fragmentary vertical sectional view taken substantially as indicated by the staggered section line V—V of FIGURE 2;

FIGURE 6 is an enlarged transverse vertical sectional view taken substantially as indicated by the line VI—VI of FIGURE 2;

FIGURE 7 is a bottom plan view of a foot exerciser sandal embodying principles of the instant invention, but of a somewhat different construction, showing the attachment means in section and with the outersole eliminated;

FIGURE 8 is a fragmentary vertical sectional view taken substantially as indicated by the line VIII—VIII of FIGURE 7, with the device in upright position;

FIGURE 9 is a fragmentary plan sectional view illustrating the device equipped with a toe spreader on the sole block;

FIGURE 10 is a fragmentary side elevational view of the structure of FIGURE 9;

FIGURE 11 is a fragmentary plan view of our improved sandal, showing the attachment means equipped with a toe spreader; and

FIGURE 12 is a fragmentary side elevation of the structure of FIGURE 11.

As shown on the drawings:

In the first illustrated embodiment of the instant invention, seen in FIGURES 1 to 6 inclusive of the drawings, there is shown a foot exerciser sandal comprising a sole block 1 on the underside of which is attached an outersole 2 of any desirable material, and which can satisfactorily be of non-slip porous crepe. The sole block 1 is relatively thick in comparison with the outsole 2 and may be made of any suitable material, molded from a thermoplastic or thermosetting plastic, or made of other materials, it being highly satisfactory to utilize a single piece of hardwood with a contoured upper surface for this purpose. The bounding shape of the sole block and outersole is generally that of a human foot, structure for a right foot being illustrated in the drawings. It will be understood, of course, that an allochiral structure would be used for the left foot.

As indicated at 3 in FIGURE 1, the naked foot of the user rests directly upon the upper surface of the sole block 1. The upper surface of the block 1 is contoured in keeping with the plantar surface of a foot and includes a depression at 4 to provide a cupped heel seat, an intermediate elevation indicated at 5 to underlie the longitudinal arch of the foot, a depression at 6 for the metatarsal head of the great toe, and a generally transverse elevation 7 in the forepart of the block which is gripped by the toes of the user during walking.

The metatarsal crest or elevation 7 extends inwardly from the outer edge of the sole block 1 and terminates short of the great toe of the foot. This elevation is located just anteriorly of the metatarsal arch of the foot, so the toes extend over the elevation while the metatarsal heads contact the sole block at the rear side of the elevation. As in FIGURE 3, the elevation 7 is of relatively low height underneath the small toe of the foot, then increases in thickness as seen in FIGURE 4 until it reaches a relatively great height under the second and third toes of the foot, and then drops off abruptly toward the great toe depression 6, leaving the great toe resting in the depression and entirely off the elevation 7. Consequently, when the weight of the body rests upon the surface of the sole block 1, the great toe is urged away from the other toes into anatomically correct position. Thus, the formation of crooked toes is prevented or discouraged by the sandal, and a condition of hallux valgus existing theretofore is alleviated or possibly corrected.

Attachment means for holding the sandal on the foot of a user are provided in the form of strap members 8 and 9 which may be adjustably connected over the top of the foot by a buckle 10. As seen best in FIGURE 6, each of the strap members 8 and 9 preferably comprise outer and inner cover members 11 and 12, which may desirably be of soft leather or the equivalent, and an inner layer 13 of cushioning material which may be of any suitable soft material such as padding, polyurethane or polyvinyl foam, foam latex, etc. As also seen in FIGURE 6, the strap members are secured to opposed side edges of the block 1, and for this purpose it is quite satisfactory to utilize a plurality of screws 14 driven into the block through the strap, and it is preferable to utilize a washer 15 inside the head of each screw to avoid the possibility of the screw tearing the strap. It is a simple expedient to buckle the strap members over the metatarsal arch region of the foot to provide a snug embracing relationship with the foot. Preferably, no other means are utilized to attach the sandal to the foot, the heel of the foot being free to raise and lower relatively to the sole block 1.

In the use of the sandal above described, no special talents of the wearer are necessary. The sandal is put on the foot and the strap members adjusted to snugly embrace the foot. The sandals are worn preferably with the feet naked, since hosiery interferes with the proper flexing and spreading of the toes. When the foot is at rest it is positioned squarely upon the upper contoured surface of the sole block 1, as seen in FIGURE 1. As a step is taken, the toes of the foot contract and grip the elevation 7, while the heel raises a short distance off the sole block. As the foot is elevated off the floor, the gripping of the elevation 7 by the toes tends to raise the rear portion of the sandal into contact with the foot, and while the foot is swinging forward just in advance of again contacting the floor at the completion of a step, the toes are preferably elevated or stretched upwardly, and as the foot again comes to rest on the floor, the toes assume their original position over the elevation 7.

The constant flexing of the toes in alternately gripping and releasing the elevation 7 stimulates and strengthens the entire foot and some of the leg muscles, definitely increases circulation to the foot and leg, relieves and corrects arch sag and stiffened joints, strengthens and raises the metatarsal arch and thus eliminates calluses on the ball of the foot, and results in increasing the overall well being of the user. It is not intended that the user should scuff across the floor, but should wear the sandals and walk in his natural way. It is also not intended that the sandals be worn all day long, but at the start, particularly if the foot is ailing in some respect, the sandals should be worn for a short time each day, and the time gradually increased until they can be worn comfortably for hours at a time. The simple wearing of the sandals and walking results automatically in correctly positioning the foot and exercising it, and no time is wasted since the sandals may be worn while performing other household tasks.

In that form of the invention seen in FIGURES 7 and 8, a sandal is shown comprising a sole block 16 which, on its upper face, is contoured the same as the sole block

1 above described. In this instance, however, the underside of the block is provided with a plurality of longitudinal grooves 17, the provision of which reduces the weight of the block, rendering the sandal considerably lighter. Also, in this instance we have illustrated slightly different means for holding the strap ends anchored to the sole block. In addition to the screws 14, each strap end is also held by an elongated staple 18 overlying the outer face of the strap end and has its end spikes 19—19 driven into the block on either side of the strap. The screws 14 then pass through both the staple 18 and the strap end. This method of securing the strap end may obviously be utilized on the sandal described above in connection with FIGURES 1 to 6 inclusive, if so desired.

In FIGURES 9 and 10 we have illustrated the use of a toe spreader 20 mounted on the sole block 1. This toe spreader is preferably flanged at the upper end as indicated at 21 and at the lower end as indicated at 22. It may be secured to the sole block in any suitable manner, cementitiously or otherwise. Also, the toe spreader may be made of plastic, rubber or rubber-like material, wood, or any other suitable substance. As shown, the spreader is positioned to separate the great toe from the second toe of the foot, but obviously it can be positioned between whatever toes of the foot need the aid of a separator.

In the construction of FIGURES 10 and 11, the same sandal structure as above described is provided, except that a strap member 8a, which is the same as the strap member 8, except for the provision of an extension 23 projecting forwardly from the strap member, carries a toe spreader 24. The toe spreader 24 is secured to the underside of the strap extension 23 and the lower end of the spreader rests loosely on the upper surface of the sole block 1.

Both the toe spreader arrangements above described, either the spreader 20 or the spreader 24, affords additional gripping action for the toes between which it is located which also aids in maintaining the sandal on the foot of the user, in addition to the toe spreaders performing their normal and intended function.

From the foregoing, it is apparent that we have provided a durable, lightweight foot exerciser sandal so constructed that when worn comfortably during walking in a natural manner, the sandals automatically correctly position the foot and exercises the same. The device is economical to manufacture and economical to use by virtue of its long life.

It will be understood that modifications and variations may be effected without departing from the scope of the novel concepts of the present invention.

We claim as our invention:

A foot exerciser sandal comprising a sole block of rigid material contoured in keeping with the plantar surface of a human foot and having a depression formed therein for receiving the great toe, a transverse elevation on said block positioned to underlie the outer four toes of a foot, said elevation terminating inwardly and abruptly adjacent the location of the great toe, strap means secured to said block in position to embrace the foot of a user in the region of the metatarsal arch, said strap means being the only means for retaining the sandal on the foot of a user, whereby gripping of said elevation by the outer four toes maintains the heel portion of the block adjacent the heel of the foot during walking.

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